

AA 15-07  
SUB

Parker Creek  
07-0001 S

S1829-6180

Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
*Chair*

Ren Serey  
*Executive Director*

**STATE OF MARYLAND  
CRITICAL AREA COMMISSION  
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

1804 West Street, Suite 100, Annapolis, Maryland 21401  
(410) 260-3460 Fax: (410) 974-5338  
[www.dnr.state.md.us/criticalarea/](http://www.dnr.state.md.us/criticalarea/)

October 6, 2009

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, Md 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced final subdivision submittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed, and pool, and construction of five new dwellings, and driveways on each of the proposed lots. Within the 2.66 acre property, 0.35 acres are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA).

The applicant has addressed the comments of this office from my June 22, 2009 letter. At this time, we have no further comment.

Thank you for the opportunity to provide comment. If you have questions regarding this project, please call (410) 260-3479.

Sincerely,

A handwritten signature in black ink, appearing to read "L. Turcan Hockaday", followed by a horizontal line.

L. Turcan Hockaday  
Natural Resource Planner  
cc: AA 15-07

Martin O'Malley  
Governor

Anthony G. Brown  
Lt. Governor



Margaret G. McHale  
Chair

Ren Serey  
Executive Director

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June 22, 2009

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed and pool, and construction of five new dwellings and driveways on each of the proposed lots. Within the 2.66 acre property, 0.35 acres are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA). The applicant has addressed most of this office's comments from my April 9, 2009 letter. I have outlined my remaining comments below:

- 1) It appears that the applicant has combined the area of RCA with the area of LDA on the property so that the proposed 16,562 square feet of lot coverage is calculated as being only 14.3% of the whole property in order to meet the LDA lot coverage limit. The actual proposed LDA lot coverage is 16.5%. The statutory limits for lot coverage do not provide for a transfer of allowed lot coverage from one Critical Area designation to another because the RCA and LDA land designations represent distinct characteristics. Therefore, only the area of LDA on the property can be used for the purposes of calculating the percentage of lot coverage proposed within the LDA. The development restrictions within the LDA were established by the Critical Area Criteria. In particular, COMAR 27.01.02.04.C requires that, "in developing their Critical Area Programs, local jurisdictions shall use all of the following criteria for Limited Development Areas: ... (7) For stormwater runoff, man-caused impervious areas shall be limited

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Mr. Burke  
June 22, 2009  
Page 2 of 2

to 15 percent of the site." Therefore, land designated as LDA has a maximum 15% lot coverage limit. The applicant must amend the plans accordingly.

- 2) As requested, the applicant has included a plat note confirming that the proposed lots will not be created with riparian rights and only one pier will be allowed on the property. Also, please have the applicant add information within this note regarding the number of slips that will be proposed, so as to confirm that this number is in conformance with COMAR 27.01.03.07. We note that since the length of shoreline is less than 50 feet, it appears that this pier is limited to one slip. Please have the applicant add this to the note.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07



Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
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*Executive Director*

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April 9, 2009

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed and pool, and construction of five new dwellings and driveways on each of the proposed lots. Within the 2.66 acre property, 0.35 acres are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA). The applicant has addressed most of this office's comments from my December 31, 2008 letter. I have outlined my remaining comments below:

- 1) Please have the applicant include the acreages of the RCA and LDA on the property within the information on the plat.
- 2) It appears that the applicant has combined the area of RCA with the area of LDA on the property so that the proposed 16,562 square feet of lot coverage is calculated as being only 14.3% of the whole property in order to meet the LDA lot coverage limit. The statutory limits for lot coverage do not provide for a transfer of allowed lot coverage from one Critical Area designation to another because the RCA and LDA land designations represent distinct characteristics. Therefore, only the area of LDA on the property can be used for the purposes of calculating the percentage of lot coverage proposed within the LDA. Please have the applicant make the necessary corrections to the lot coverage calculations on the plat and plans.

- 3) The applicant has indicated in response to our office's request for the area of private tidal wetlands on the property that the property line was surveyed as the Mean High Water line (MHW), and therefore the entire extent of tidal wetland acreage within the property is private tidal wetlands for the purposes of including this area in lot coverage and tree clearing calculations. However, there are two overlapping property lines shown on the plat. Please have the applicant clarify which of these lines is MHW. Also, please provide the elevation at which MHW was measured.
- 4) As requested, the applicant has submitted a planting plan with the resubmittal. In previous comment letters, this office has indicated that establishment of the Buffer with native plantings is required separate from the plantings that are provided to meet the 10,620 square foot reforestation mitigation requirement. However, it appears that the only plantings that are shown on the planting plan are provided in the Buffer. The proposed plantings appear to be sufficient for establishing the Buffer, but the 10,620 square foot mitigation requirement remains outstanding. We note that it appears that there may not be sufficient room on site to locate the remaining 10,620 square feet of mitigation required and consequently, the applicant may have to address this requirement through fee-in-lieu payment. If so, please have the applicant make a note that the mitigation requirement will be addressed with a fee on the plat and plans.
- 5) As requested, the applicant has included a plat note confirming that the proposed lots will not be created with riparian rights and only one pier will be allowed on the property. Also, please have the applicant add information within this note regarding the number of slips that will be proposed, so as to confirm that this number is in conformance with COMAR 27.01.03.07.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07

Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
*Chair*

Ren Serey  
*Executive Director*

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December 31, 2008

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed and pool, and construction of five new dwellings and driveways on each of the proposed lots. 0.35 acres of the property are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA). The applicant has addressed most of this office's comments from my August 22, 2008 letter. I have outlined my remaining comments below:

- 1) There are inconsistencies between the numbers shown on the plat and plans with reference to the area of proposed clearing and the area of the proposed forest conservation easement. The plat shows that 6,000 square feet of existing forest will be cleared with 23,718 square feet placed in an easement, while the plans show that 7,080 square feet will be cleared with 36,712 square feet placed in an easement. Please have the applicant resolve these inconsistencies.
- 2) It appears that the 14.3% proposed lot coverage figure was calculated using the entire property area including the area of tidal wetlands. When the area of tidal wetlands is subtracted from the property area, the proposed lot coverage calculation exceeds 15%. In order to include tidal wetlands in the property area for purposes of calculating the allowable area of lot coverage, a certified wetland delineator must delineate state tidal wetlands from private tidal wetlands, and only the area of private wetlands can be included in the property area for purposes of

calculating lot coverage. Alternatively, the applicant may subtract the total area of tidal wetlands from the property area and reduce the proposed lot coverage so that it is below 15% lot coverage limit.

- 3) We note that in the response to this office's comments, the applicant indicates that a planting plan will be forwarded to this office for review. Please forward the planting plan with future submittals when it is available.
- 4) As requested, the applicant has included a plat note confirming that the proposed lots will not be created with riparian rights and only one pier will be allowed on the property. Please have the applicant add this note to the plans as well. Also, the applicant should provide information showing that the proposed number of slips on the community pier will be in conformance with COMAR 27.01.03.07. The pier and the proposed path through the Buffer to access the pier must be shown on the plans. This path should be incorporated to the planting plan to be submitted to this office.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07

Martin O'Malley  
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August 22, 2008

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed and pool, and construction of five new dwellings and driveways on each of the proposed lots. 0.35 acres of the property are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA). The applicant has addressed most of this office's comments from my May 27, 2008 letter. I have outlined my remaining comments below:

- 1) We note that in the applicant's response to this office's comments, the applicant indicates that a planting plan will be forwarded to this office for review. Please include on that planting plan information about whether the 10,620 square feet of required reforestation mitigation will be addressed with plantings onsite in addition to the required Buffer plantings, by offsite plantings, or, by fee-in-lieu payment.
- 2) This office notes that the current plans show the proposed lot lines for lots 1, 2 and 3 within the 100-foot Buffer. Since this area must be reestablished in plantings and will be placed in a conservation easement, we recommend that the lot lines be adjusted so that they are not within the 100-foot Buffer. If the applicant has drawn the lot lines within the Buffer in order to meet the 25% impervious surface limit for lots smaller than one acre within a subdivision, we note that as of July 1, 2008, the State Critical Area law changed such that



Mr. Burke  
August 22, 2008  
Page 2 of 2

individual lots less than one acre within a subdivision are no longer restricted to a 25% impervious surface limit, as long as the total lot coverage within the subdivision is less than 15% of the area of the subdivision. §1808.3(d), Ch. 119, 2008 Laws of Maryland.

- 3) As requested, the applicant has confirmed that the proposed lots will not be created with riparian rights and only one pier will be allowed on the property. Please have the applicant include a note on the plat and plans stating this fact. The applicant should provide information showing that the proposed number of slips on the community pier will be in conformance with COMAR 27.01.03.07. The pier and the proposed path through the Buffer to access the pier must be shown on the plans. This path should be incorporated to the planting plan to be submitted to this office.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07

Martin O'Malley  
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May 27, 2008

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of an existing 2.66 acre lot into five lots, removal of an existing dwelling, driveway, shed and pool, and construction of five new dwellings and driveways on each of the proposed lots. 0.35 acres of the property are designated as a Resource Conservation Area (RCA) and 2.31 acres are designated as a Limited Development Area (LDA). The applicant has addressed most of this office's comments from my January 28, 2008 letter. I have outlined my remaining comments below:

- 1) As requested, the revised plans show that the Buffer will be established with plantings in accordance with Anne Arundel County Code § 17-8-303. However, these plantings are required in addition to the mitigation plantings for the proposed forest clearing on the property. If there is not enough room to provide the 10,620 square feet of required reforestation plantings on site outside of the Buffer, the applicant may address this requirement with a fee in lieu payment.
- 2) This office notes that the current plans show the proposed lot lines for lots 1, 2 and 3 within the 100-foot Buffer and the 25-foot nontidal wetland buffer. Since this area must be reestablished in plantings and will be placed in a conservation easement, we recommend that the lot lines be adjusted so that they are not within the 100-foot Buffer. Also, the applicant may be required to obtain a permit from Maryland Department of the Environment for creating new lots within a nontidal wetland. If it is not feasible to reconfigure the proposed lots and meet the LDA

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Mr. Burke  
May 27, 2008  
Page 2 of 2

development requirements, we recommend that the applicant provide fencing and/or signage to deter future property owners from encroaching into this area.

- 3) Please have the applicant place the existing forested areas on the property that will not be cleared in a conservation easement.
- 4) It does not appear that the proposed lots are being created with riparian rights. In order to clarify that this is the case, we recommend that the applicant include a plat note stating that no individual piers will be allowed on the property. We note that the applicant has indicated that there is an existing boathouse and pier on the shoreline of the property which the applicant intends to reconstruct and use as a community pier. In order to do so, the applicant must obtain the necessary State and County permits and comply with the slip number limits as provided in COMAR 27.01.03.07. Also, the applicant should show the proposed community pier and how it will be accessed by the community on the plat and plans.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07

Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
*Chair*

Ren Serey  
*Executive Director*

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January 28, 2008

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of one parcel into five lots, removal of an existing dwelling and driveway, and construction of five new dwellings and driveways on each of the proposed lots. The property is designated as a Resource Conservation Area (RCA) and a Limited Development Area (LDA). The applicant has addressed some of this office's comments from my October 9, 2007 letter. I have outlined my remaining comments below:

- 1) According to this office's records, there appears to be a forested nontidal wetland in the northwestern corner of the property. Please have the applicant confirm in the field whether there is a nontidal wetland in this location. The plans show that there will be forest clearing in this area for a fire suppression tank, and the proposed driveway, garage and house on lot 4. If the proposed development will impact nontidal wetlands, the applicant must obtain a permit from Maryland Department of the Environment (MDE). Also, we recommend that the applicant relocate the house on proposed lot 4 farther toward the southern building restriction line to minimize disturbance to the existing forested area and if applicable, the nontidal wetland.
- 2) It appears that a significant portion of the property, including the majority of the RCA on the property, is tidal wetlands. As you are aware, State-owned areas of tidal wetlands cannot be included within the total property area for the purpose of

calculating density, impervious surface area limits, and forested areas. If the applicant wishes to include any tidal wetlands within the property area, a field delineation must be performed determining the location and extent of private versus State-owned wetland areas. Absent this delineation, the applicant may choose to remove the entire extent of tidal wetlands from the property acreage totals. Once the ownership of wetland areas has been determined, please have the applicant revise and resubmit the impervious surface area and forest clearing calculations as necessary.

- 3) Anne Arundel County Code § 17-8-303 requires that, "development on a site without an existing natural buffer within 100 feet of the shoreline shall have a buffer reestablished in accordance with the following: (1) a fully functioning buffer shall be created in accordance with an approved buffer management plan; and (2) planting shall consist of a combination of native trees, shrubs, and ground cover approved by the Office of Planning and Zoning." It does not appear that there is an established vegetated 100-foot Buffer on the property and therefore, the applicant must submit a Buffer management plan showing the requisite Buffer plantings for establishment of a vegetated 100-foot Buffer. These plantings are required in addition to the mitigation plantings for the proposed forest clearing on the property. Since there appears to be a nontidal wetland within the 100-foot Buffer, any plantings that are proposed in the nontidal wetland should be reviewed by MDE to ensure the viability of the proposed species. Further, the Buffer should be placed in a forest conservation easement to ensure that the Buffer plantings will not be cut or cleared in the future. We recommend that the County require the establishment of the Buffer to be completed by the developer so as not to pass on the requirement to future individual lot owners.
- 4) This office notes that the current plans show the proposed lot lines for lots 1, 2 and 3 within the 100-foot Buffer. Since this area must be reestablished in plantings and should be placed in a forest conservation easement, we recommend that the lot lines be adjusted such that they are not within the 100-foot Buffer.
- 5) The plans show the planting area for the forest clearing mitigation in the tidal wetlands. Mitigation requirements for clearing upland vegetation cannot be met by planting wetland species. Therefore, the applicant can not use this area to do reforestation mitigation plantings and must locate the reforestation plantings somewhere other than the tidal wetlands on the property.
- 6) While we note these numbers will be revised as requested above, it appears that the applicant currently proposes to clear 24.8% of the existing forested area on the site and accordingly the applicant must provide reforestation mitigation at a 1.5:1 ratio. Further, COMAR 27.01.02.04.C(3)(c) requires that an area equal to 80% of the existing forested area be placed in a conservation easement. If there is not adequate space within the currently proposed footprint of development to place 80% of the existing forested area in a forest conservation easement, the applicant



Mr. Burke  
January 28, 2008  
Page 3 of 3

should adjust the proposed number or configuration of lots. Please note that tidal wetlands, whether private or State-owned, cannot be included within the 80% of forested area to remain.

- 7) The soils information on the plans shows that the 100-foot Buffer is contiguous with the hydric soil Deale-Shadyoak (DcA) and therefore the Buffer may be expanded to include this hydric soil. Please have the applicant provide information regarding how much of the property is comprised of the hydric DcA soil. If the whole property consists of hydric soils and is consequently within the expanded Buffer, this office recommends against approval of the proposed subdivision because development on the proposed lots would require variances for disturbance within the expanded Buffer. It is this office's policy that variances should not be required for development on newly created non-grandfathered lots, and consequently this office would find it difficult to support granting of variances for development on the proposed lots.
- 8) It does not appear that the new proposed lots are being created with riparian rights. In order to clarify that this is the case, we recommend that the applicant include a plat note stating that no piers will be allowed on the property. We note that there currently appears to be a boathouse or some other structure located on the shoreline of the property. If so, this structure should be removed if the proposed subdivision is approved.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07

Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
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*Executive Director*

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October 9, 2007

Mr. Tom Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, MD 21401

Re: Parker Creek  
S-05-014, P-07-0153

Dear Mr. Burke:

Thank you for forwarding the above referenced subdivision resubmittal. The project consists of the subdivision of one parcel into five lots, removal of one dwelling and driveway, and construction of five dwellings and driveways. The property is designated as a Resource Conservation Area and a Limited Development Area. The applicant has addressed some of this office's comments from Megan Sines' January 29, 2007 letter. I have outlined my remaining comments below:

- 1) The current plans show that 18.9% of the LDA on the site is proposed impervious surface and is in excess of the 15% impervious surface limit. It appears that the applicant has mistakenly combined the acreage of both the RCA and the LDA for purposes of calculating what is shown on the plans as the 14.99% proposed impervious surface area. Proposed impervious surface calculations must be done separately for the proposed impervious surfaces within the RCA and the LDA, and each calculation must be under the 15% limit. Therefore, the applicant must reduce the proposed impervious surface area in the LDA.
- 2) We note that the applicant proposes to provide the required reforestation on-site in the 100-foot Buffer as is typically recommended. However, the applicant only proposes reforestation plantings in the portion of the Buffer that is mapped as tidal wetlands. Buffer plantings that meet the reforestation requirement must consist of woody, upland species of plants. This can be a combination of canopy, understory and herbaceous plants. It is unclear how these upland plantings will

Mr. Tom Burke  
October 9, 2007  
Page Two

survive in a tidal wetland. Accordingly, we recommend that the reforestation area be located in the portion of the Buffer that is not a tidal wetland, and the applicant may provide additional tidal wetland plantings in the tidal wetland if these will not disturb the existing tidal wetland vegetation and habitat; however, these plantings may not be counted towards meeting our planting requirements. All proposed plantings must be shown in a buffer management plan and the plan should be submitted to the Commission and the County.

- 3) The plan shows that no part of the RCA portion of the existing parcel is within the proposed lots. However, the plat shows the RCA line crossing through a portion of lot 3. Please have the applicant clarify which RCA line is correct, and if necessary, adjust the proposed lot 3 boundary so that no portion of RCA is within the proposed lots.
- 4) As mentioned above, we recommend that the forest conservation area be within the Buffer outside of the tidal wetland area. We also recommend that the applicant provide signage and a plat and plan notation that there will be no disturbance within this forest conservation area.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3482.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 15-07



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January 29, 2007

Mr. Thomas Burke  
Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road, MS 6301  
Annapolis, Maryland 21401

Re: Parker Creek – P07-0001

Dear Mr. Burke:

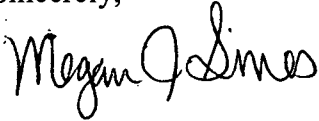
I have received the above-referenced subdivision request for review and comment. The applicant proposes to create five lots in the Limited Development Area (LDA) with one of the lots crossing into the Resource Conservation Area (RCA). I have outlined my comments below.

1. It appears the subdivision will be at, or near the 15% impervious surface limit for the entire site. We recommend the applicant reduce the initial impervious area in order to reserve impervious area for the future lot owners.
2. We recommend a table be added to the final plat indicating the total allowable impervious area per lot for the benefit of future homeowners, and to ensure the subdivision will not exceed the allowable impervious surface limits.
3. A note should be added to the plat and deeds that explain that no disturbance is permitted beyond the expanded Buffer or Forest Conservation Easement line.
4. The use of the Grass Crete in the turn around area should be counted as impervious area given that we do not recommend their use for auto traffic. Depending on the purpose and need for this area, the applicant may consider removing it in order to reduce impervious coverage on the property.
5. A plat note should be added to indicate that all plantings for the required afforestation and/or stormwater management be native species.

6. We recommend some form of signage or permanent markers be provided along the rear of those lots that abut the Forest Conservation Area so that future homeowners will know where the boundaries begin.

Thank you for the opportunity to comment. Please telephone me at (410) 260-3476 or Lisa Hoerger at (410) 260-3478 if you have any questions.

Sincerely,

A handwritten signature in black ink, reading "Megan J. Sines". The signature is written in a cursive, flowing style.

Megan J. Sines  
Natural Resources Planner

cc: AA 15-07



**Bay Engineering Inc.**  
Engineers, Planners and Surveyors



August 24, 2009

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

RECEIVED

AUG 25 2009

PLANNING AND ZONING  
DEVELOPMENT

P07-0153 00 NF

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153-00 NF  
Tax Map 78, Grid 2, Parcel 0308

This is a point-by-point response to the comments generated during the review of the Final Development Plan dated July 8, 2009. Please forward these responses to the appropriate agencies.

Office of Planning and Zoning  
Development Division  
Planning and Environmental Review  
Comment Letter Dated June 24, 2009  
Thomas Burke

Planning:

1. Comment noted. The modification to count the boathouse/pier as recreation area has been submitted.
2. Comment noted.
3. Comment noted. HOA documents will be submitted prior to plat approval and will state that membership is mandatory and maintenance of the open space/recreation parcel and structures (pier and boathouse) is shared.

Environmental:

1. Forest conservation and mitigation for clearing will be completed prior to plat signature.
2. The comment from the Critical Area Commission regarding the coverage limit has been resolved.

Anne Arundel County  
Development Division  
Public Works and Utility  
Comment Letter Dated June 16, 2009  
John Bory

A) Roads:

No Comments.

B) Storm Drains:



No Comments.

C) Storm Water Management

No Comments.

D) Utilities

No Comments.

E) Final Development Plan

Comment noted.

F) Plat

Comment noted.

G) Flood Plain Study

No Comments.

**State of Maryland**

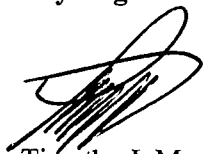
**Critical Area Commission**

**Comment Letter Dated June 22, 2009**

**Amber Widmayer**

1. The LDA lot coverage limits for this project have been revised to 15% coverage for the LDA portion of the site only. The proposed road and proposed driveways have been reduced in size in order to reduce the impervious coverage in the LDA to 15%, as shown in the plans.
2. A general note has been added to the plat clarifying that the amount of slips allowed will conform to COMAR regulations.

Sincerely,  
Bay Engineering, Inc.



Timothy J. Martin, L.S.



# Bay Engineering Inc.

Engineers, Planners and Surveyors



May 2, 2009

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

RECEIVED

MAY  
APR 18 2009

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

PLANNING AND ZONING  
DEVELOPMENT

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

**Office of Planning and Zoning**  
**Development Division**  
**Planning and Environmental Review**  
**Thomas Burke**

P07-0153 00 NF

Planning:

1. A modification to fee-in-lieu will be formally submitted.
2. Based on the use of the community pier the property owner will request a modification to allow the proposed pier to serve as the recreational area.
3. HOA documents will be submitted prior to plat approval.
4. The note has been revised to read Forest Conservation Easement.
5. A valid address has been given to the intake clerk.

**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

A) Roads:

1. Final plans have been submitted prior to this comment letter per our phone conversation

D) Utilities:

1. Final plans have been submitted prior to this comment letter per our phone conversation

F) Plat

1. A public works agreement will be completed once our office receives the signed public plans back from the County.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. The acreages of the RCA and LDA have been added to the plat under the "Area Calculations" section.
2. Anne Arundel County Code 17-8-402(c) states "Impervious surface associated with a lot of one acre or less that is part of a subdivision approved after December 1, 1985, may be increased to 25% of the lot if the area of impervious surface for the entire subdivision does not exceed 15%". The section of the code does not distinguish between RCA and LDA; it simply states the entire subdivision. Both the area for the RCA and LDA are a part of this subdivision.
3. The property line and the OS line have been clarified for better viewing. The Mean High Water line and elevation is now indicated on the plat.
4. A note has been added to the plat (under forest clearing mitigation note) and final development plan to indicate that a fee in lieu is proposed for the remaining 10,620 sf of mitigation.
5. A general note has been added to the plat clarifying the amount of slips allowed.

Sincerely,  
**Bay Engineering, Inc.**



Jeff Smith, P.E.

RECEIVED

FEB 24 2009

PLANNING AND ZONING  
DEVELOPMENT

# PARKER CREEK

## ESTIMATE FOR BOND

P07-0153 00 NE

### REFORESTATION PLANTING

Q'TY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	UNIT \$	TOTAL \$
4	Acer rubrum	Red Maple	2"cal., min.	b&b/cont.	\$250	\$1,000
16	Baccharis halimifolia	Grounse Tree	1 gallon	cont.	\$16	\$256
42	Clethra alnifolia	Summersweet	1 gallon	cont.	\$16	\$672
23	Ilex verticillata	Winterberry	1 gallon	cont.	\$16	\$368
10	Liquidambar styraciflua	Sweetgum	2"cal., min.	b&b/cont.	\$205	\$2,050
10	Morella cerifera	S. Waxmyrtle	1 gallon	cont.	\$16	\$160
15	Morella pennsylvanica	Northern Bayberry	1 gallon	cont.	\$16	\$240
7	Magnolia virginiana	Sweetbay MAgnolia	2" cal. Min.	b&b/cont.	\$300	\$2,100
3	Pinus taeda	Loblolly Pine	2" cal. Min.	b&b/cont.	\$300	\$900
						\$7,746

Above derived from 2008 wholesale prices from American Native Plants, Pinelands Nursery & Supply, and Heartwood Nursery, Inc., and Natural Landscapes Nursery, with a factor of 2.5 to cover installation, warranty)

TOTAL ESTIMATE FOR BOND: \$7,746

Prepared By:

Date: August, 2007  
Revised: December, 2008

DEBORAH M. SCHWAB  
Landscape Architecture  
MD LA Lic No. 759  
409 Washington Street  
Annapolis, MD 21403  
Ph 410 268 5291



**Bay Engineering Inc.**  
Engineers, Planners and Surveyors



February 20, 2009

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

RECEIVED  
FEB 24 2009

PLANNING AND ZONING  
DEVELOPMENT

P07-0153-00-NF

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

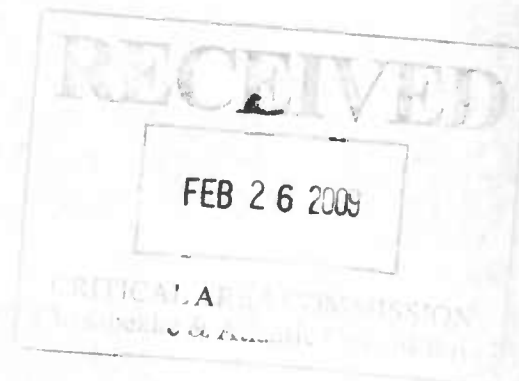
**Office of Planning and Zoning**  
**Development Division**  
**Planning and Environmental Review**  
**Thomas Burke**

**Planning:**

1. The spelling has been corrected for note #12 of the plat.
2. Based on the use of the community pier the property owner will request a modification to allow the proposed pier to serve as the recreational area.
3. The plan & plat have been revised to indicated a 10' strip of land not included in the forest conservation area. An access path and/or boardwalk permit will be obtained during the grading permit. The required MDE/COE permit will be applied for at time of grading permit.
4. HOA documents will be submitted prior to plat approval.
5. Per our meeting, the sequence of construction has been revised on sheet 4. Note #5 now includes the removal of the diving board and concrete apron.
6. The signature block has been revised on the plat.
7. The note has been revised to read Forest Conservation Easement.

**Environmental:**

1. General note #7 has been revised on the plat and plan.
2. The reforestation plan has been added to the FDP.
3. The plat has been revised.
4. The clearing and wooded numbers have been revised to match.



**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

A) Roads:

1. The plans have been revised per your mark up and our meeting and the original marked up set has been enclosed herewith.

D) Utilities:

1. The plans have been revised per your mark up and our meeting and the original marked up set has been enclosed herewith.

F) Plat

1. The public utility easement has been noted on the cover sheet and metes and bounds have been provided.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. The square footage calculations have been revised to match.
2. The property line delineation was based on the mean high water mark. We determined the high water mark topographically based upon field survey and reference to published benchmark information provided by NOAA. There are private tidal wetlands with-in this site. The delineation between state tidal wetlands and private tidal wetlands was determined by elevation.
3. The reforestation plan is attached as part of the final development plan.
4. The pier note has been added to the plans. The community pier will be applied for at time of grading permit. Based on our meeting with Tom Burke from Anne Arundel County, a 10' strip of area has been removed from the forest conservation area, the proposed access will fall within this area and will be permitted with the pier at time of grading permit.

Sincerely,  
**Bay Engineering, Inc.**



Jeff Smith, P.E.

# Bay Engineering Inc.

Engineers, Planners and Surveyors



November 20, 2008

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

Office of Planning and Zoning  
Development Division  
Planning and Environmental Review  
Thomas Burke

Planning:

- P07-0153 00 NF**
1. The location of the boathouse is indicated on the plan. Note #12 has been added to the general notes on the plat stating no individual piers will be allowed.
  2. Based on the use of the community pier the property owner will request a modification to allow the proposed pier to serve as the recreational area.
  3. A revised landscape plan with access path to the boathouse area will be submitted under separate cover. The required MDE/COE permit will be applied for at time of grading permit.
  4. HOA documents will be submitted prior to plat approval.
  5. The property owner will only remove area within the LOD. The proposed LOD does not extend into the proposed forest conservation area. The owner will plant in-fill plantings per the requirement from the Critical Area Commission.

Environmental:

1. General note #7 has been revised.
2. The reforestation plan has been added to the FDP.
3. The note on the plat has been revised.
4. The clearing and wooded numbers have been revised to match.

**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

A) Roads:

1. The plans have been revised per your mark up and our meeting and the original marked up set has been enclosed herewith.

B) Storm Drains:

1. A sealed overall drainage area map has been attached with computations.
2. The overall drainage area map includes the site, tributary and POI with Tc and computations.

C) Stormwater Management:

1. No comments

D) Utilities:

1. The plans have been revised per your mark up and our meeting and the original marked up set has been enclosed herewith.

E) Final Development Plan:

1. The overall drainage area map includes the site, tributary and POI with Tc and computations.

F) Plat

1. The public utility easement has been noted on the cover sheet and metes and bounds have been provided.

G) Flood Plain Study

1. A 48" pipe rule analysis has been included in the SWM report.

**Anne Arundel County**  
**Department of Recreation and Parks**  
**Dawn Thomas**

1. Comment noted.
2. The modification will be withdrawn if the P & Z office accepts the revised forest conservation, open space and recreation area as stated above.
3. Pictures of the boathouse have been included. The proposed boathouse and pier will be submitted by the owner a time of grading permit.
4. The age of the existing boathouse & pier can't be determined, pictures are attached.
5. The location of the boathouse & pier is indicated on the plans.

6. The boathouse will provide an amenity for all 5 lots to enjoy. It is an area used for recreation by the homeowners.
7. The open space and recreation areas are indicated on the plan.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. An additional planting plan will be forwarded to your office.
2. Anne Arundel County Code Section 17-8-402(c) require that lots less than one acre created after December 1, 1985 may not exceed 25% impervious and that the overall subdivision does not exceed 15% impervious. Therefore, in order to meet the County code we need to keep the lot square footage and location as indicated.
3. Note #12 has been added to the plat. The community pier will be applied for with the grading permit not at this time with the subdivision. A path and plantings have been added the planting plan.

**Anne Arundel County**  
**Historic and Archaeological**  
**Jane Cox & Darian Schwab**

1. A copy of the phase one archaeological survey is attached.

Sincerely,  
**Bay Engineering, Inc.**



Jeff Smith, P.E.

# Bay Engineering Inc.

Engineers, Planners and Surveyors



August 11, 2008

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

Office of Planning and Zoning  
Development Division  
Planning and Environmental Review  
Thomas Burke

Planning:

1. The location of the boathouse is indicated on the plan. It is the intent of the property owner to apply for a new pier/boathouse permit and demolish the existing boathouse. The CAC is aware of the existing boathouse and will allow the construction of the new pier as long as there are no additional piers. No lot has front property and therefore cannot construct any additional piers.
2. Article 17-3-401 (c) states that Open Space shall have a minimum road frontage of 15', which has been provided.
3. The area of natural construction has been revised to forest conservation. This area along with the open space area now meets with 30% open space requirement.
4. The net density has been calculated as requested and is shown on the latest coversheet of the Final Development Plans.
5. The existing swimming pool and heavily vegetated areas will be removed during the reforestation process.
6. Access to the boathouse will be allowed through the open space area. The heavy vegetation will be reforested allowing easy passage.

Environmental:

1. The natural conservation area has been revised to forest conservation.
2. General note #7 has been revised as requested.
3. The reforestation plan has been included as part of the Final Development Plans.

**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

**A) Roads:**

1. The plans have been revised per your mark up and the original marked up set has been enclosed herewith.

**B) Storm Drains:**

1. The stormwater management report is bound (stapled because of the size) with photographic walking tour.
2. A drainage area map is included with the final development plan which identifies the site & tributary outfall and POI. The site drains directly to tidal waters and the three areas of concern (site outfall, tributary outfall and point of investigation) occur at the same point. The drainage area mapping including the site, tributary outfall and POI have been included on the SWM credit plan. The computations for each drainage area are included in the stormwater management report.

**C) Stormwater Management:**

1. A photographic outfall analysis has been included.

**D) Utilities:**

1. Comment noted, the plans have been revised per your mark up and the original marked up set has been enclosed herewith.

**E) Final Development Plan:**

1. Comment noted; the site, tributary, and POI drainage area outfall points are shown on the SWM practice plan of the final development plans. Time of concentration flow paths and TR55 computations for each drainage area have been included in the SWM report.

**F) Final Development Plan:**

1. Comment noted.

**G) Plat**

1. The public utility easement is indicated on the cover sheet with metes and bounds.
2. A right to discharge signature block and narrative has been added to the plat.
3. The public water allocation note has been removed.
4. Comment addressed.

**H) Flood Plain Study**

1. Comment noted this will be addressed and submitted under a separate cover.

Final Development Plan:

1. The property owner would prefer to have access as a side load house.

Traffic Control & Pavement Marking Plan:

1. Comment noted, the plans have been revised per your mark up and the original marked up set has been enclosed herewith.

Plat:

1. A PWA will be submitted
2. Comment noted

**Anne Arundel County**  
**Department of Recreation and Parks**  
**Dawn Thomas**

1. Comment noted.
2. The modification will be withdrawn if the P & Z office accepts the revised forest conservation, open space and recreation area as stated above.
3. Comment noted; 15' of road frontage has been provided to allow access to the open space.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. An additional planting plan will be forwarded to your office.
2. Based on the limited amount of impervious coverage allowed on each lot of 25% (with an overall coverage of 25%) the lots cannot be reduced. The house and driveway coverage have been reduced to a minimum in order to meet this allowance. Forest conservation has been placed on the lots per the County's direction.
3. In order to maintain the buffer along the water, much of this area has been placed within forest conservation area. Additional forest conservation area has been added to lots 4 & 5.
4. No lot will be able to constructed piers; the 3 lots along the water are actually not water front lots because of the open space and forest conservation area. The community pier and/or boathouse will be part of the recreation area for the subdivision. Access is allowed along the west side of lot 1 with a 15' access to the area.



**Anne Arundel County**  
**Historic and Archaeological**  
**Jane Cox & Darian Schwab**

1. A phase one Archaeological study is currently been preformed and will be submitted upon completion.

Sincerely,  
Bay Engineering, Inc.

A handwritten signature in cursive script, appearing to read "J Smith".

Jeff Smith, P.E.

# Bay Engineering Inc.

Engineers, Planners and Surveyors



April 14, 2008

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

**Office of Planning and Zoning**  
**Development Division**  
**Planning and Environmental Review**  
**Thomas Burke**

**Planning:**

1. The site tabulation area has been revised which demonstrates adequate density, clearing and impervious areas.
2. The modification information is on the plat & plan and will be finalized upon decision.
3. The plat has been revised.
4. The setback information has been removed.

**Environmental:**

1. A copy of the critical area report is attached.
2. The plantings have been relocated outside the tidal and non tidal wetlands. The proposed plantings are located with-in a natural conservation easement. The site is subject to clearing limitations which have been met. The 100 foot buffer has been planted to the maximum extent possible. As noted above, the proposed planting area has been encumbered by a Natural Conservation Easement because Anne Arundel County Code prohibits Forest Conservation Easements on lots less than 10 acres.
3. A mitigation note has been added to the plat and plan. The planting of the 100 foot buffer has been maximized and noted on the plans.
4. The mitigation note has been added to the plat and plan referencing the requirements of 17-8-602 (c) (1).
5. The hydric soil report has been added to the critical area report and was resolved with the critical area commission.

**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

A) Roads:

1. The plans have been revised per your mark up and the original marked up set has been enclosed herewith.

B) Storm Drains:

1. The stormwater management report is bound (stapled because of the size) with photographic walking tour.
2. A drainage area map is included with the final development plan which identifies the site & tributary outfall and POI. The site drains directly to tidal waters and the three areas of concern (site outfall, tributary outfall and point of investigation) occur at the same point. The drainage area mapping including the site, tributary outfall and POI have been included on the SWM credit plan. The site drainage area has been shown but due to the vast drainage area of Parker Creek and the de minimis amount of drainage from our site a comprehensive drainage area map and analysis of the Parker Creek watershed has not been provided. Our Stormwater summary on the cover sheet of the FDP outlines the exemptions two of which relate to the Qp and Qf. The site review of Parker Creek revealed no obvious signs of erosion in the tidally influenced site outfall.
3. A RTD's for each relevant lot have been added to the plan & plat.

C) Stormwater Management:

1. Extreme Flood (Qf) is addressed via direct tidal discharge and has been referenced on the plan and computations package.
2. A SWM practice plan is included in the final development plans.
3. Photographic outfall analysis has been included with the SWM report for the road drainage as well.
4. Computations are included in a binder.
5. The grass channel credit is used for road and house runoff, calculations are included in the SWM report.

D) Utilities:

1. Comment noted, the site is to be served by public sanitary sewer and private well. Public plans were attached with the original submittal and have been included once again for review.

E) Final Development Plan:

1. Additional topo has been added to include 100' offsite. The site is flat and there are not many contours. We have added spot elevations per our field run topography off site in the road areas.

2. The drainage area mapping including the site, tributary outfall and POI have been included on the SWM credit plan. The site drainage area has been shown but due to the vast drainage area of Parker Creek and the de minimis amount of drainage from our site a comprehensive drainage area map and analysis of the Parker Creek watershed has not been provided. Our Stormwater summary on the cover sheet of the FDP outlines the exemptions two of which relate to the Qp and Qf. The site review of Parker Creek revealed no obvious signs of erosion in the tidally influenced site outfall.
3. A profile of the public and private road is included.
4. An access/utility easement is consistent.
5. Road section plans have been revised to indicate public & private.
6. Grass channel data is included in the SWM report.
7. Waivers are indicated on plan.
8. An outfall statement is included on the plan.
9. Existing MH data is indicated.
10. The channels have been labeled.
11. Spot elevations have been added to indicate how channels work.
12. Cross section data for channels has been included in the SWM report.
13. Street trees have been added to the plan.
14. A note on the cover sheet was approved during the sketch plan process.
15. The detail for the fire suppression tank indicates the concrete apron starts at the edge of pavement.

F) Plat:

1. The public utility easement has been corrected on the plat.
2. The RTD is indicated on the plat.

G) Flood Plain Study

1. A drainage area map is included with the final development plan which identifies the site & tributary outfall and POI. The site drains directly to tidal waters and the three areas of concern (site outfall, tributary outfall and point of investigation) occur at the same point. The drainage area mapping including the site, tributary outfall and POI have been included on the SWM credit plan. The site drainage area has been shown but due to the vast drainage area of Parker Creek and the de minimis amount of drainage from our site a comprehensive drainage area map and analysis of the Parker Creek watershed has not been provided. Our Stormwater summary on the cover sheet of the FDP outlines the exemptions two of which relate to the Qp and Qf. The site review of Parker Creek revealed no obvious signs of erosion in the tidally influenced site outfall.

**Anne Arundel County**  
**Development Division**  
**Traffic**  
**John Bory**

Roads:

Final Development Plan:

1. Based on limited rear yard due to tree clearing limits and side load garage would eliminated the extra pavement from the front of the house allowing a usable front yard. Should the driveway be located in the front yard there would be a very limited area of yard.
2. A note on the cover sheet was approved during the sketch plan process which outlines the parking options. We have shown two off street parking spaces to demonstrate compliance. During the permit process a combination of garage and off-street parking may be implemented.
3. The public road has been revised and is no longer on the lot.
4. A transition has been added and it should be noted that only five homes will access this road.

Traffic Control & Pavement Marking Plan:

1. Sequence of construction has been removed.
2. Complete traffic control notes have been added.
3. Area of work is indicated on the plan as well as a note indicating that the specific traffic control devices to be utilized shall be determined by the contractor and inspector.
4. Details have been added.

Responses to the February 21, 2007 letter from Jon Mayer:

- The initial 150 feet of the Parker Creek access road (Parker Creek Court) has been revised to a public road.
- We have come as close to a tee intersection as is feasible. The proposed road has been designed to accommodate drainage and area for grading. A straight tee intersection was not feasible because of the lack of right of way to accommodate the above issues relating to drainage and grading. A review of the current road configuration has been performed by the Fire Marshalls office.
- The modification has been revised to address the road terminus issue.
- The driveway for lot 1 has been moved to the East.

Plat:

1. A PWA will be submitted
2. Comment noted

General

1. All traffic comments were address during sketch plan review see attached letter to Chris Soldano dated March 14, 2007.

**Anne Arundel County**  
**Department of Recreation and Parks**  
**Dawn Thomas**

1. Comment noted
2. The modification was submitted, a copy is attached.
3. Based on the code section 17-3-506, open space does not state a required access width; 10' should adequate for the pedestrian access.
4. Passive recreation has been removed.
5. The word dry ground has been removed.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. A copy of the approved JD is attached which indicates no wetlands in the northwest area.
2. The southern property line (adjacent to the water) indicates the mean high water level. Therefore, no area on site is within the State-owned wetland area and the overall site calculations are allowed to remain unchanged.
3. Per our meeting, a revised buffer management plan is attached. Natural conservation areas are indicated on lots 1-3. It should be noted, the County does not allow forest conservation on a lot less than 10 acres.
4. A buffer management plan is attached.
5. A revised planting plan is included in the buffer management area.
6. The conservation easement indicated is greater than the 80% of the existing forest.
7. A copy of the hydric soils study prepared by Professor Martin C. Rabenhorst is attached. The report indicates no hydric soil other than the MZA located within the buffer.
8. Per our meeting, the existing boat house & pier are to be used by the community and this area is included in the open space to be owned by the Home owners association.

**Anne Arundel County**  
**Historic and Archaeological**  
**Jane Cox & Darian Schwab**

1. A phase one Archaeological study is currently been preformed and will be submitted upon completion.



190 Admiral Cochrane Drive, Suite 175 – Annapolis, MD 21401  
Ph. 410-897-9290 Fax: 410-897-9295  
[www.BayEngineering.com](http://www.BayEngineering.com)

**Bay Engineering Inc.**  
Engineers, Planners and Surveyors



December 24, 2007

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Thomas Burke

Re: Parker Creek Subdivision  
Subdivision #S2005-014 Project #P2007-0153  
Tax Map 78, Grid 2, Parcel 308

This is a point-by-point response to the comments generated during the review of the Final Development Plan. Please forward these responses to the appropriate agencies.

**Office of Planning and Zoning**  
**Development Division**  
**Planning and Environmental Review**  
**Thomas Burke**

**Planning:**

1. The site tabulations have been revised.
2. Note #12 has been removed.
3. The code reference has been changed to '13' on the allocation note.
4. The code reference has been changed to '17'
5. The corner lot 4 has been revised to 20' setback.
6. Comment noted
7. The critical area RCA/LDA line has been corrected on the plat to be consistent with the final development plans.

**Environmental:**

1. The requested critical area information has been added to the plat.
2. Our office has enclosed an additional critical area report.
3. The house on lot 5 has been moved closer to the front setback line & the driveway/garage has been relocated to the opposite side on lot 1 in order to eliminate some impervious area.
4. Comment noted, our office will refer to the Critical Area Commission regarding the reforestation plantings.
5. Forest clearing and tabulation information has been added to the plat.
6. Comment noted

**Anne Arundel County**  
**Development Division**  
**Public Works and Utility**  
**John Bory**

#### Roads:

1. The plans have been revised based on additional meetings and comments. The modification to road standards was granted on May 2, 2007.
2. In order to allow lot 4 to have an option of a side load garage access should be allowed off the proposed public road. If access is required off the private road, the lot may be in excess of the allowable impervious coverage.
3. The drive on lot 1 has been revised to the opposite side of the house.

#### Storm Drains:

1. Drainage area mapping and analysis for the proposed channels has been provided.
2. The public road will convey flow to the adjacent ditch. No ditch check dams are required.

#### Stormwater Management:

1. Extreme Flood (Qf) is addressed via direct tidal discharge.
2. A SWM
3. Photographic outfall analysis has been included with the SWM report.
4. Computations are included in a binder.

#### Utilities:

1. Comment noted, the site is to be served by public sanitary sewer and private well. Public plans were attached with the original submittal and have been included once again for review.

#### Flood Plain Study:

1. Comment noted

#### Final Development Plan:

1. Additional topo has been added to include 100' offsite
2. The drainage area mapping including the site, tributary outfall and POI have been included on the SWM credit plan. The Tc is also indicated on this plan. TR55 computations are included within the SWM report.
3. A benchmark has been added to the FDP.
4. General note #6 has been revised to include boundary information.
5. General note #6 on the plat and FDP indicates the field survey was prepared by Bay Engineering, Inc.
6. The designation of RCA & LDA is indicated on note 7.
7. Due to minimal change in elevation along the proposed road, only spot elevations have been utilized. An offsite grading easement is not needed due to minimal change in elevation.
8. The private access/utility easement is consistent on all plans.
9. Road section has been added to sheet 6 of the FDP & sheet 2 of the public road plans.
10. No stormdrains are anticipated on this site.
11. Waivers requested are indicated on the plat.



12. A private road cross section has been added to sheet 6 of the FDP. Spot elevations have been indicated which show the 1% cross slope. A private road profile is not needed due to the small amount of private road, only 70' of the 20' wide private section is private and the remaining 80' could be considered a driveway.
13. The private and public road width and R/W is indicated on the plan.
14. An outfall note (statement) is indicated on the cover sheet of the FDP.
15. The cover sheet of the FDP indicates the existing and proposed impervious coverage for each lot with percentage.
16. The existing MH rim and invert is indicated on the public sewer plans and the FDP.
17. Channels are labeled on the SWM credit plan.
18. Due to minimal change in elevation along the proposed road, only spot elevations have been utilized. Channel calculations have been included in the SWM report.
19. Velocity cross-sections for the channel have been indicated on the low side of the site. Velocity is less than 1 cfs and therefore is within a non-erosion velocity, no level spreader appears to be needed.

**Sediment and Grading Plan:**

1. The fire suppression tank is indicated on the grading and sediment plan
2. Comments 2-19 are addressed above

**Plat:**

1. A SWM note has been added to the plat.
2. A use in private common access easement has been added to the plat.

**Public Road & Storm Drain Sheets:**

1. Redlined plans were not received

**Public Water & Sewer Sheets:**

1. Redlined plans were not received

**Anne Arundel County**  
**Health Department**  
**Peter Puzak**

1. The water well has been relocated 50' from the fire suppression tank on lot 4.

**Anne Arundel County**  
**Department of Recreation and Parks**  
**Dawn Thomas**

1. Recreation area calculations have been added to the FDP and plat.
2. A modification note for recreation area is indicated on the plat.

**State of Maryland**  
**Critical Area Commission**  
**Amber Widmayer**

1. The Anne Arundel County Code 17-8-402(c) states "Impervious surface associated with a lot of one acre or less that is part of a subdivision approved after December 1, 1985, may be increased to 25% of the lot if the area of impervious surface for the entire subdivision does not exceed 15%.
2. The planting plan will be revised and submitted to you under separate cover.
3. The plat has been revised to be consistent with the FDP and the RCA line.
4. A forest conservation note is on the plat which indicates no disturbance within this area.

**Anne Arundel County**  
**Historic and Archaeological**  
**Jane Cox & Darian Schwab**

1. A phase one Archaeological study will be submitted upon completion.

Sincerely,  
**Bay Engineering, Inc.**



Jeffrey Smith, P.E.

**Bay Engineering Inc.**  
Engineers, Planners and Surveyors



August 23, 2007

Office of Planning and Zoning  
Heritage Office Complex  
2664 Riva Road  
Annapolis, MD 21401  
Attn: Tom Burke

P 07 - 0153 - 11

**RECEIVED**

AUG 27 2007

Re: Parker Creek  
Subdivision #2005-014, Project #2007-0001

PERMIT APPLICATION CENTER

This is a point-by-point response to the comments generated during the conditional approval of the Sketch Development Plan submittal for this Subdivision. Please forward these responses to the appropriate agencies.

**Office of Planning and Zoning**  
**Development Division**  
**Traffic**  
**Jon Mayer**

1. Comment noted.
2. A modification has been submitted for road standards.
3. The grass crete turn around has been removed and a 40' public road section has been added.
4. A note has been added to the cover sheet of the final development plan which indicated 2 parking spaces per house.
5. The private access easement has been narrowed to 30'.

**Soil Conservation District**  
**Jon Mayer**

1. The correct plan has been submitted with the final development submittal.
2. A copy of the approved JD is attached.
3. Comment noted

**Health Department**  
**Pete Puzak**

1. The proposed well has been relocated on lot 4.


**Office of Planning and Zoning**  
**Development Division**  
**Fire Department**  
**Charles Disney**

1. A 5000 gallon fire suppression tank has been added

**Office of Planning and Zoning**  
**Development Division**  
**Parks & Recreation**  
**John Keene**

1. Calculations for Recreation area required and provided are indicated on the plans.
2. No fee in lieu is requested.

Sincerely,  
**Bay Engineering, Inc.**

  
Jeff Smith, P.E.





REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
P.O. BOX 1715  
BALTIMORE, MD 21203-1715

RECEIVED

SEP 08 2006

Operations Division

See Environmental Services, Inc.  
Attn: Eric E. See  
Suite 217  
2444 Solomons Island Road  
Annapolis, Maryland 21401



Dear Mr. See:

This is in reference to your letter dated July 2, 2006, regarding application CENAB-OP-RMN(CULP ENTERPRISES/PARKER CREEK SUBD/JD)06-64001-24, requesting a jurisdictional determination (JD) and verification of the delineation of Waters of the United States, including jurisdictional wetlands, on your property located in the Chesapeake Bay at Deale, Anne Arundel County, Maryland.

A field inspection was conducted on June 14, 2006. This inspection indicated that the delineation of Waters of the United States, including jurisdictional wetlands within the "Area of Review" on the enclosed drawing dated May 9, 2005, is accurate. Those areas indicated as Waters of the United States, including tidal or non-tidal wetlands are regulated by this office pursuant to Section 10 of the River and Harbor Act of 1899 and/or Section 404 of the Clean Water Act. Enclosed is a document that outlines the basis of our determination of jurisdiction over these areas.

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the North Atlantic Division Office at the following address:

James W. Haggerty  
Regulatory Appeals Review Officer  
North Atlantic Division, US Army Corps of Engineers  
Fort Hamilton Military Community  
General Lee Avenue, Bldg 301  
Brooklyn, NY 11252-6700

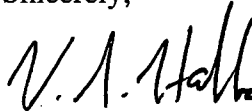
In order for this RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5 and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit a RFA form, it must be received at the above address within 60 days from the date of this letter.

It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. You are reminded that any grading or filling of Waters of the United States, including jurisdictional wetlands, is subject to Department of the Army authorization. State and local authorizations may also be required to conduct activities in the locations. In addition, the Interstate Land Sales Full Disclosure Act may require that prospective buyers be made aware, by the seller, of the Federal authority over any waters of the United States, including jurisdictional wetlands, being purchased.

This approved JD is valid for five years from the date of issuance unless new information warrants a revision before the expiration date.

If you have any questions concerning this matter, please call Mrs. Mary A. Frazier of this office at (410) 962-5679.

Sincerely,

A handwritten signature in dark ink, appearing to read "V. G. Hobbs", with a stylized flourish at the end.

Vance G. Hobbs  
Chief, Maryland Section Northern

Enclosures

**JURISDICTIONAL DETERMINATION**  
U.S. Army Corps of Engineers

Revised 8/13/04

DISTRICT OFFICE: CENAB

FILE NUMBER: 2006-64001

**PROJECT LOCATION INFORMATION:**

State: MD  
County: AA  
Center coordinates of site (latitude/longitude): 38-47-02 78-32-05  
Approximate size of area (parcel) reviewed, including uplands: 3 acres.  
Name of nearest waterway: Chesapeake Bay  
Name of watershed: Chesapeake Bay

**JURISDICTIONAL DETERMINATION**

Completed: Desktop determination ☐ Date:  
Site visit(s) ☒ Date(s): 16 June 06

**Jurisdictional Determination (JD):**

☐ Preliminary JD - Based on available information, ☐ there appear to be (or) ☐ there appear to be no "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).

☒ Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).  
Check all that apply:

☐ There are "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: .

☒ There are "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: <1 acres.

☐ There are "isolated, non-navigable, intra-state waters or wetlands" within the reviewed area.  
☐ Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

**BASIS OF JURISDICTIONAL DETERMINATION:**

**A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":**

☒ The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

**B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":**

- ☒ (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- ☐ (2) The presence of interstate waters including interstate wetlands.
- ☐ (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
- ☐ (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ (iii) which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ (4) Impoundments of waters otherwise defined as waters of the US.
- ☐ (5) The presence of a tributary to a water identified in (1) - (4) above.
- ☐ (6) The presence of territorial seas.
- ☒ (7) The presence of wetlands adjacent<sup>2</sup> to other waters of the US, except for those wetlands adjacent to other wetlands.

**Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above).** *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:* Nontidal wetlands drain to tidal wetlands adjacent to Chesapeake Bay

**Lateral Extent of Jurisdiction:** (Reference: 33 CFR parts 328 and 329)

- ☒ Ordinary High Water Mark indicated by:
- ☐ clear, natural line impressed on the bank
  - ☐ the presence of litter and debris
  - ☐ changes in the character of soil
  - ☐ destruction of terrestrial vegetation
  - ☐ shelving
  - ☐ other:
- ☒ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☒ physical markings/characteristics
  - ☐ tidal gages
  - ☐ other:
- ☒ Mean High Water Mark indicated by:
- ☒ survey to available datum; ☒ physical markings; ☒ vegetation lines/changes in vegetation types.
- ☐ Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by:

**Basis For Not Asserting Jurisdiction:**

- ☐ The reviewed area consists entirely of uplands.
- ☐ Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
- ☐ Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
- ☐ The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- ☐ Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
  - ☐ Artificially irrigated areas, which would revert to upland if the irrigation ceased.
  - ☐ Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
  - ☐ Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
  - ☐ Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
  - ☐ Isolated, intrastate wetland with no nexus to interstate commerce.
  - ☐ Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
  - ☐ Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
  - ☐ Other (explain):

**DATA REVIEWED FOR JURSDICTIONAL DETERMINATION (mark all that apply):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant.
- ☐ Data sheets prepared/submitted by or on behalf of the applicant.
- ☐ This office concurs with the delineation report, dated \_\_\_\_\_, prepared by (company):
  - ☐ This office does not concur with the delineation report, dated \_\_\_\_\_, prepared by (company):
- ☐ Data sheets prepared by the Corps.
- ☐ Corps' navigable waters' studies:
- ☐ U.S. Geological Survey Hydrologic Atlas:
  - ☐ U.S. Geological Survey 7.5 Minute Topographic maps:
  - ☐ U.S. Geological Survey 7.5 Minute Historic quadrangles:
  - ☐ U.S. Geological Survey 15 Minute Historic quadrangles:
  - ☐ USDA Natural Resources Conservation Service Soil Survey:
  - ☒ National wetlands inventory maps:
  - ☐ State/Local wetland inventory maps:
  - ☐ FEMA/FIRM maps (Map Name & Date):
  - ☐ 100-year Floodplain Elevation is: \_\_\_\_\_ (NGVD)
  - ☐ Aerial Photographs (Name & Date):
  - ☐ Other photographs (Date):
  - ☐ Advanced Identification Wetland maps:
  - ☒ Site visit/determination conducted on: 14 June 06
  - ☐ Applicable/supporting case law:
  - ☐ Other information (please specify):

<sup>1</sup>Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

<sup>2</sup>The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.





January 12, 2006

Anne Arundel County  
Office of Planning and Zoning  
2664 Riva Road  
Annapolis, MD 21401

**RECEIVED**

JAN 03 2007

PERMIT APPLICATION CENTER

Attn: Nancy McGuckian

**P 07 - 0001**

Re: Sketch Submittal  
Culp Enterprises Property  
Tax Map 78, Grid 2, Parcel 308  
Letter of Explanation and History

Dear Nancy,

Our client wishes to subdivide Parcel 308 into 5 lots. This property is currently zoned R-5 and has access to public sewer and will be served by private water wells. This property lies in the LDA and RCA zones of the critical area. These new lots will have access to Deale Beach Road via a 40 foot wide Private Right-of-way that will be created. Each lot is being proposed to utilize a grinder pump injection system to provide sewer service to the public gravity main located in Deale Beach Road.

#### Property History

This property was conveyed to Culp Enterprises, LLC from Patricia H. Kassam by a deed dated April 30, 2004 and recorded in Liber 14930, Folio 781.

This is the same property that was conveyed from George L. Carlo to Patricia H. Carlo by a deed dated April 25, 2002 and recorded in Liber 11579, Folio 20.

This is the same property as conveyed from George L. Carlo and Patricia H. Carlo to George L. Carlo by a deed dated February 3, 2000 and recorded in Liber 9639, Folio 696.

This is the same property as conveyed from Claire McLean to George L. Carlo and Patricia H. Carlo by a deed dated December 31, 1997 and recorded in Liber 8219, Folio 8.

This is the same property as conveyed from Charles G. McLean and Claire D. Mclean to Claire Doris Mclean by a deed dated September 20, 1994 and recorded in Liber 6839, Folio 444.

This is the same property as conveyed from Walter J. Dyke and Dorothy J. Dyke to Col. Charles G. Mclean and Claire D. Mclean by a deed dated April 3, 1976 and recorded in Liber 2842, folio 60.

This is the same property as conveyed from Richard K. Leisner and George A. Hanson to Walter J. Dyke and Dorothy J. Dyke by a deed dated April 17, 1974 and recorded in Liber 2668, Folio 714.

This is the same property as conveyed from John L. Hill and Nancy B. Hill to Richard K. Leisner and George A. Hanson by a deed dated December 7, 1973 and recorded in Liber 2642, Folio 632.

Parcel 1 as described in this deed is part of parcel 1 of the property conveyed from Eleanor M. Dollar to John L. Hill and Nancy B. Hill by a deed dated May 4, 1964 and recorded in Liber 1767, Folio 359.

This is the same property as conveyed from Julye Hill to John L. Hill and Nancy B. Hill by a deed dated May 4, 1964 and recorded in Liber 1767, Folio 356.

Being all of the property as conveyed from Frank L. Trott and Ernie Trott to William G. Hill by a deed dated August 11, 1924 and recorded in Liber WNW 89, Folio 431.

Parcel 2 as described in this deed is all of parcel 2 of the property conveyed from Eleanor M. Dollar to John L. Hill and Nancy B. Hill by a deed dated May 4, 1964 and recorded in Liber 1767, Folio 359.

This is the same property as conveyed from Julye Hill to John L. Hill and Nancy B. Hill by a deed dated May 4, 1964 and recorded in Liber 1767, Folio 356.

Being all of the property as conveyed from Vernon Phipps and Grace Phipps to William G. Hill by a deed dated August 18, 1928 and recorded in Liber FSR 40, Folio 186.

Sincerely,  
**Bay Engineering Inc.**



David M. Miller  
Survey Project Manager



# UNIVERSITY OF MARYLAND

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES  
*Department of Natural Resource Sciences and Landscape Architecture*

1112 HJ Patterson Hall  
College Park, Maryland 20742-5821  
301 405 1336 TEL 301 314 9041 FAX

May 3, 2005

Mr. George Bailey  
Flagship Development  
703 Giddings Ave.  
Suite U1  
Annapolis, MD 21401

Dear Mr. Bailey:

Please find enclosed my report on the Parker Creek site in Anne Arundel County, Maryland in which I have conducted an order 1 soil survey of the site. I have concluded that the only hydric soil delineation is the Mispillion (marsh) unit on the south end of the property. There may be a few small isolated inclusions of hydric soils on the north half of the property in the Crosiadore delineation, but they are relatively minor. If you would like me to do anything additional on this site, just let me know.

I am attaching my invoice for the work completed to date. If you would prefer, you can send a single check, out of which I can pay the student who assisted me in the field.

If you have any questions, please do not hesitate to call.

Sincerely,

Martin C. Rabenhorst  
Professor of Pedology  
ARCPACS CPSS/SC #02887

Order 1 Soil Survey and Assessment for Hydric Soils  
at the Parker Creek Property  
Anne Arundel County, MD

Preliminary Report

prepared for

Flagship Development  
Annapolis, MD

by

Martin C. Rabenhorst  
Professor of Pedology, UMD  
CPSS/SC

May 3, 2005

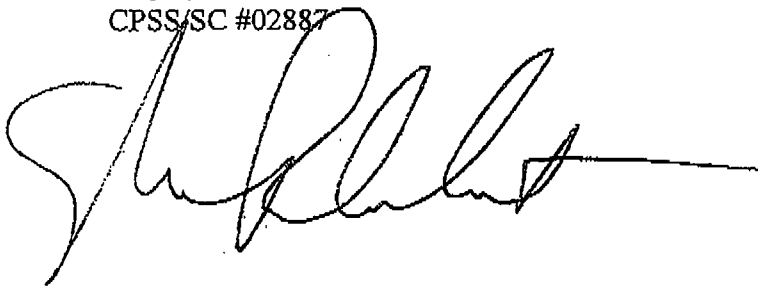
*Order 1 Soil Survey and Assessment for Hydric Soils at the Parker Creek Property - Preliminary Report***Summary**

Initial consultation of the 2003 soil survey report of Anne Arundel County raised suspicions that there may have been hydric soils on the Parker Creek property. An order 1 soil survey was done on the property using NCSS protocols, and soils were placed into seven delineations of six map units. The only hydric soil map unit used on the property was Ms unit (Mispillion soils) at the south edge of the property. The delineation of Crosiadore soils (CrA unit) at the north end of the property was carefully examined to determine whether recently approved field indicator F20 (ABLS) was present. In the highest section of the property (far north end) the morphology required for F20 was observed, but the elevation in that area was too great for the application of F20. There may be a few isolated zones which may meet a field indicator of hydric soils within the CrA delineation, but this is not a delineation of hydric soils.

Martin C. Rabenhorst

May 3, 2005

CPSS/SC #02887

A large, stylized handwritten signature in black ink, likely belonging to Martin C. Rabenhorst, is written over the typed name and date.

*Order 1 Soil Survey and Assessment for Hydric Soils at the Parker Creek Property - Preliminary Report*

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## **Background**

Property development in Anne Arundel County can be impacted by the presence of hydric soils. Initial assessment of hydric soils can be obtained by utilizing published soil survey reports for individual counties. The Anne Arundel County soil survey report was originally published in 1973. Over the last few years, the soil maps have been reviewed and updated and published on a more current photographic base that has been rectified for use in a GIS. These soil survey reports provide a list of map units that are dominated by hydric soils (where hydric soils are thought to be the major components) and also map units that might contain hydric soils (where hydric soils may represent more minor inclusions in the map units). Because these soil surveys are generally made at a scale of approximately 1:12,000, they are considered to be Order 2 surveys. This means that they are useful for general planning purposes, but they should not necessarily be accepted as fully accurate for site-specific uses. Therefore, Anne Arundel county allows individuals or developers to contract with qualified soil scientists to conduct high intensity (order 1) soil surveys to refine the data from the published soil survey reports. In order for these order 1 soil surveys to be acceptable, they must meet certain specified requirements with regard to sampling intensity and data quality.

## **Utilization of Published Soil Survey Information**

Examining the recently updated soil maps for Anne Arundel County reveals that the soils which now are on the Parker Creek site fall into two map units, DcA and MZA with two other units occurring in the general vicinity (SoA and DeA) (Figure 1). The DcA map unit (Deale-Shadyoak Complex, 0 to 2 percent slopes) and the DeA map unit (Deale-Shadyoak Urban Land Complex, 0 to 2 percent slopes) are both dominated by Deale and Shadyoak soils that have formed in loess (windblown silts) that were deposited near the end of the Pleistocene epoch (approximately 15,000 years ago). The Deale soil is a somewhat poorly drained soil and the Shadyoak soil is a poorly drained soil. The Shadyoak soil is on the hydric soil list. The MZA map unit mainly includes Mispillion and Transquaking soils, on nearly level slopes. These are organic soils dominated by mucky peat and containing sulfidic materials which can generate extreme acidity when oxidized. These soils are on the hydric soil list. The other map unit in the vicinity (SoA) is the Shadyoak-Elkton Complex, 0 to 2 percent slopes. These are poorly drained soils that have also formed in Pleistocene age loess. Both Shadyoak and Elkton soils are poorly drained indicating a seasonally high water table in the upper part in most years, and therefore are on the list of hydric soils. The primary difference between the two soils is that the Shadyoak soil contains a buried soil within the profile.

## **Detailed (Order 1) Soil Survey Investigation at the Parker Creek Site**

In order to more accurately document which soils were present on the site, an order 1 soil survey was undertaken with mapping being conducted at a scale of approximately 1:1000. In order to prepare the detailed (order 1) soil map for the Parker Creek site, detailed soil descriptions were made at 9 locations, following NCCS procedures where soils were classified according to Soil

Taxonomy (Figure 2). In addition to these, five other soil observations were made as notes, usually when they were similar to other nearby detailed soil descriptions. There were also 6 soil observations made where the presence and thickness of disturbed material at the soil surface was noted (F). Soils were mapped into seven delineations of six map units. The soil map units used in this project are described in Table 1. The final soil map is shown in figure 2. Generally speaking, most of the soils on this site were formed in glauconitic coastal plain sediments covered by a silty mantle of loess that ranged in thickness from less than 50 cm to greater than 1 meter. The silty mantle is thickest at the north end of the property where soils were mapped in delineations named for the Crosiadore series, and became thinner toward the south end of the property where the soils were mapped in delineations named for the Adelpia soil series. The marsh soils were terric sulfhemists and were placed into a map unit named for the Mispillion soil series. One delineation of UrA - Urban Land, 0-2% slopes was identified in the immediate vicinity of the existing house and kennels, where it was difficult to examine the soils due to existing structures. A single deep observation (point 14) confirmed that this area was highly disturbed and contained fill material with some earthen and anthropogenic debris. In the area identified as Adelpia-urban land complex, the upper parts of the soils (usually between 10 and 50 cm) were made of fill or disturbed materials that were covering intact or partially truncated Adelpia soils.

#### **Assessment of Hydric Soils**

The Mispillion delineation is adjacent to the shore and the soils of this map unit are on the hydric soil list, meet NTCHS field indicators of hydric soils A1 (histosols), and A4 (hydrogen sulfide), and also meet COE field indicators. Therefore clearly they are hydric soils. As one moves from south to north on the property, away from the shoreline, the silt loam textured materials forming the upper portion of the soil profile become thicker. Therefore, the soils on the southern portion of the site were included in the Adelpia soil series, even though they possessed a thin (up to approximately 50 cm) silty mantle. Adelpia soils are moderately well drained (typically showing redox depletions of chroma 2 or less in the zone between 50 and 100 cm from the soil surface) and have formed in Coastal Plain sediments containing glauconite. These soils did not meet any of the NTCHS field indicators nor any of the COE field indicators and were not hydric soils.

In general, the soil morphological features indicate that the soils are better drained in the southern part of the property, and become less well drained as one moves toward the rear (north) of the site. The soils on the back (northern) portion of the Parker Creek property were included in a delineation of the Crosiadore map unit. Crosiadore soils are somewhat poorly drained soils, typically showing redox depletions of chroma 2 or less in the zone within 50 cm of the soil surface but not having a depleted matrix of chroma 2 or less in the zone immediately below the A horizon. Crosiadore soils have formed in at least 60 cm of silty loess deposits, and most of the Crosiadore soils observed on this site had approximately 100 cm of silty materials overlying coastal plain sediments containing glauconite.

The Crosiadore and similar soils described on this property do not meet any of the COE field indicators for hydric soils, and only the soil observed at point 8 meets an approved NTCHS field



indicator (F3a - depleted matrix). There are several instances, however, where the Crosiadore soils met the morphological requirements of a recently approved NTCHS field indicator F20 (Anomalous Bright Loamy Soils)<sup>1</sup> (points 1, 2, 6, and 9). But in addition to the morphological requirements, this indicator also requires that it be used within 650 feet of the edge of tidal wetlands (which this property would meet) and within 3 feet vertically of mean high water (or nominally the tidal marsh surface). Figure 4 shows that the edge of the marsh reaches to an elevation between 1 and 2 feet, which means that indicator F20 should only be applied up to an elevation of approximately 4-5 feet. At the rear (north) of the property, the elevation rises above 5 feet for the last 150 feet, so that technically, it may be beyond the elevation range approved for indicator F20. Three of the four observations of F20 (pts 1, 2 and 9) occurred in this rear portion of the site that is above 5 feet in elevation. In the front (southern) portion of the Crosiadore delineation that has an elevation below 5 feet, 2 of 3 observations (pts 7 and 11) did not meet the morphological requirements of F20 - only pt 6 met the morphological requirement. Therefore, while there may be a few isolated zones which may meet a field indicator of hydric soils (F3a near point 8 and F20 near point 6) in the main, the CrA delineation does not represent hydric soils.

## Conclusion

Initial consultation of the 2003 soil survey report of Anne Arundel County raised suspicions that there were hydric soils on the Parker Creek. An order 1 soil survey was conducted on the property and soils were placed into six map units. The only hydric soil map unit used on the property was Ms unit (Mispillion soils) at the south edge of the property. The delineation of Crosiadore soils (CrA unit) at the north end of the property was carefully examined to determine whether recently approved field indicator F20 (ABLS) was present. In the highest elevation section of the property (far north end) the morphology required for F20 was observed, but the elevation in that area was too great for the application of F20. There may be a few isolated zones which may meet a field indicator of hydric soils within the CrA delineation, but this is not a delineation of hydric soils.

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<sup>1</sup>F20. Anomalous Bright Loamy Soils. Within 200m (656 feet) of estuarine marshes or waters and within 1m (3.28 feet) of mean high water, a mineral layer at least 10cm (4 inches) thick starting within 20cm (8 inches) of the soil surface with a matrix (60 percent or more of the volume) chroma less than 5 and 10% or more distinct or prominent redox concentrations as soft masses or pore linings and/or depletions. For use in MLRA 149A of LRR S and MLRA 153C and 153D of LRR T; for testing in MLRA 153B of LRR T. Approved by the National Technical Committee on Hydric Soils, February, 2005.

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## Tables

Table 1. Map units utilized in order 1 soil map of the Parker Creek property.			
Map Unit Symbol	Map Unit Name	Classification of Named Soil	Description
AdA	Adelphia loam; 0-2% slopes	Fine-loamy, mixed, active, mesic Aquic Hapludults	Moderately well drained loamy soils with a thin silty mantle <60 cm thick, overlying glauconite bearing coastal plain deposits
AdB	Adelphia loam; 2-5% slopes	Fine-loamy, mixed, active, mesic Aquic Hapludults	Moderately well drained loamy soils with a thin silty mantle <60 cm thick, overlying glauconite bearing coastal plain deposits
AuA	Adelphia-Urban land complex; 0-2% slopes	Fine-loamy, mixed, active, mesic Aquic Hapludults	These are moderately well drained loamy soils with a thin silty mantle <60 cm thick, overlying glauconite bearing coastal plain deposits but have been altered by human activity by scalping or by filling with up to 50cm of material of varied origin
CrA	Crosiadore silt loam; 0-2% slopes	Fine-silty, mixed, active, mesic Aquic Hapludults	Somewhat poorly drained silty soils formed in 60 cm or more of loess overlying sandier coastal plain deposits
Ms	Misphillion soils	Loamy, mixed, euic, mesic Terric Sulfhemists	Tidally influenced soils of brackish marshes containing >40cm organic materials and sulfides
UrA	Urban land; 0-2 % slopes	Udorthents	Somewhat poorly drained formed in materials that have been altered by human activity by scalping or by filling with up to 100cm of material of varied origin; underlying soil materials have been derived from Crosiadore or Adelphia soils.

**Figures**

Figure 1. Location of parcel 308 on Parker Creek with showing the soil mapping delineations from the 2003 soil survey of Anne Arundel county. Shadyoak, Elkton, Mispillion and Transquaking soils are all on the hydric soils list. Therefore, the Deale-Shadyoak complex map units may contain hydric soils and need to be carefully examined.

## Order 1 Soil Survey and Assessment for Hydric Soils at the Parker Creek Property - Preliminary Report

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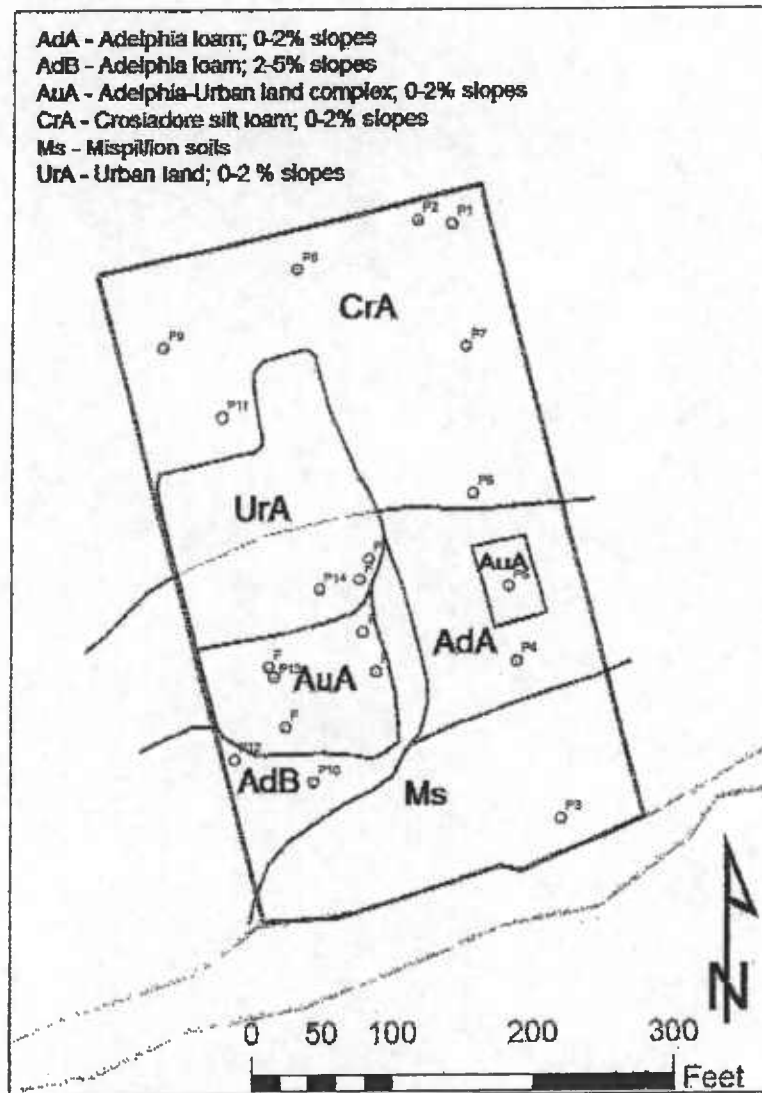


Figure 2. Order 1 soil survey for the Parker Creek property showing the locations where detailed soil descriptions were made (numbered) and additional points where the presence of disturbed or "fill" materials was noted (F). Detailed explanations of the map units can be found in Table 1.

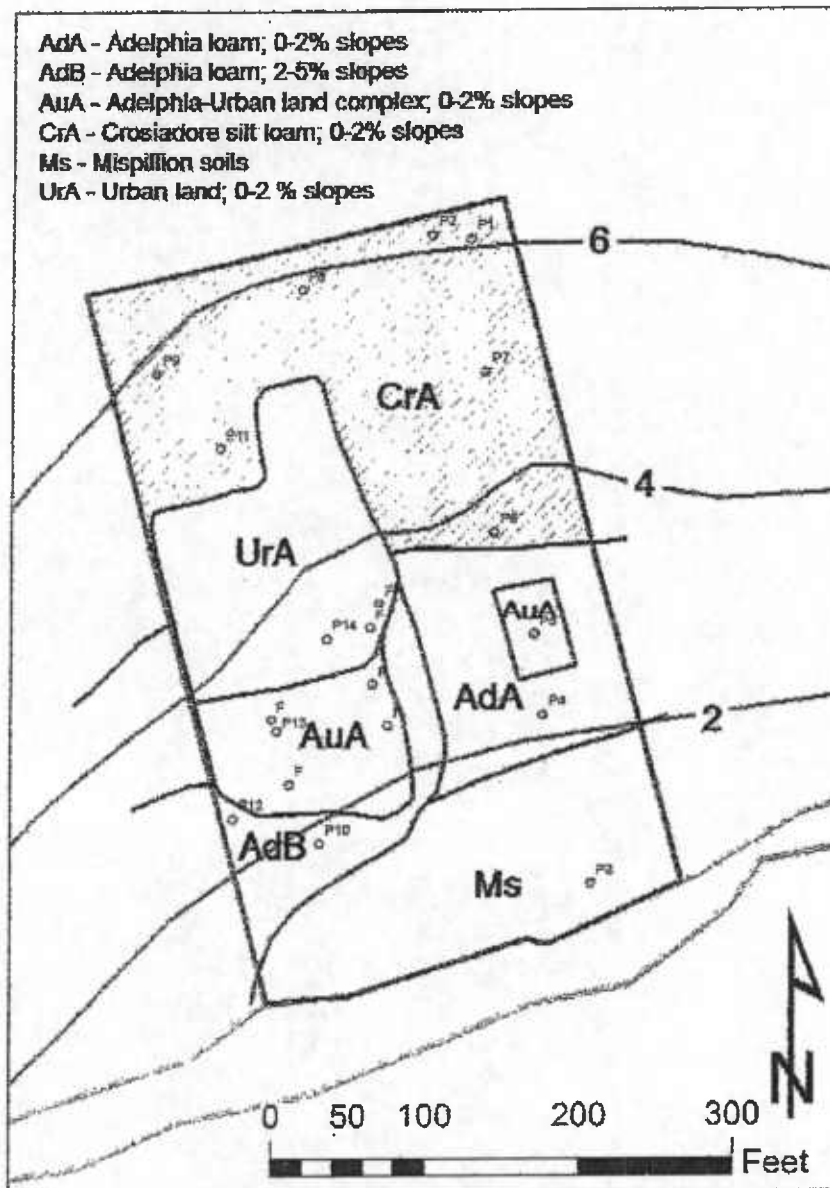


Figure 3. The cross-hatched CrA delineation was thought to possibly represent a hydric soil unit. However, careful evaluation of FI F20 led to the conclusion that this was not a hydric soil map unit.

## Soil Descriptions

Parker Creek # 1 Easting 1444376 Northing 406128						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A1	0-6	sil; 10% clay	10YR 2/2	1 f gr	vfr	
A2	6-13	sil; 10% clay	10YR 3/2	1 m gr	vfr	
BA	13-23	sil; 12% clay	2.5Y 5/3			5% faint 2.5Y 5/2 depletions of Fe; 15% distinct 10YR 4/4 soft masses of Fe
Bt1	23-60	sil; 25% clay	2.5Y 5/3.5			15% distinct 2.5Y 5/1 depletions of Fe; 30% distinct 10YR 5/6 soft masses of Fe
Bt2	60-85	sicl; 30% clay	10YR 5/8			30% prominent 5Y 6/2 depletions fo Fe; 10% distinct 7.5YR 4/6 soft masses of Fe
Bt3	85-115	sicl; 28% clay	7.5YR 5/4			10% distinct 10YR 5/2 d epletions of Fe; 20% distinct 10YR 5/6 soft masses of Fe
2BC	115-165	fsl; 14% clay	2.5Y 5/4			15% distinct 2.5Y 6/2 depletions of Fe; 5% prominent 5YR 5/8 soft masses of Fe
2BCg	165-195+	lfs/fsl; 5% clay	2.5Y 5/2			25% faint 2.5Y 5/4 soft masses of Fe
Water observed in open borehole at approximately 15 cm.						
Note: This soil is similar to the Crossiadore series. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 2	Easting 144351	Northing 406130	Quick Note
Similar to point #1. Located 25 ft west of point #1 on microdepressional landform. Has 3cm of O3 horizon at the surface. Has higher proportion of 2 chroma depletions in the BA horizon. Still does not meet Field Indicator F3. May meet Field indicator F20.			
Water observed in open borehole at approximately 0 cm.			
Note: This soil is similar to the Crossiadore series. This soil is somewhat poorly drained. Described by MCR April 9, 2005.			

Parker Creek # 3	Easting 144464	Northing 405709	Quick Note
Located 25 ft north of the water line in an area of tidal marsh. This is a sulfhemist.			
Water observed in open borehole at approximately 0 cm.			
Note: This soil is similar to the Mispillion series. This soil is very poorly drained. Described by MCR April 9, 2005.			

Parker Creek # 4 Easting 1444430 Northing 405819						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-12	sil/l; 10% clay	10YR 3/2	1 f gr	vfr	
Ap	12-23	sil/l; 14% clay	2.5Y 4/3	1 m gr	vft	
Bt1	23-45	sil/l; 20% clay	10YR 5/6			10% fine faint 10YR 4/6 soft masses of Fe
2Bt2	45-70	fsl; 16% clay	10YR 5/6			5% faint 2.5Y 6/4 depletions of Fe; 10% faint 7.5YR 5/6 soft masses of Fe
2Btg1	70-94	fsl; 15% clay	5Y 6/1 (40%)			30% distinct 5Y 5/3 and 30% prominent 2.5YR 5/6 soft masses of Fe
3Btg2	94-125	sc; 38% clay	5GY 3/3			25% distinct 5Y 4/4 soft masses of Fe
3BCg	125-180	lfs; 4% clay	5GY 3/3			20% distinct 5Y 4/3 soft masses of Fe
Water observed in open borehole at approximately 30 cm.						
Note: This soil formed in loess (45cm) overlying glauconitic sediments and is similar to the Adelphia series. This soil is moderately well drained. Described by MCR April 9, 2005.						



Parker Creek # 5	Easting 1444423	Northing 405871	Quick Note
This soil occurs on a scalped land surface in a rectangular shape with some of the material piled into a berm on the south end of the scalped area which has impounded water. The soil is similar to pit #4, with the exception that the upper 40-50 cm has been removed. Some Typha (cattails) and Juncus (rush) growing in this area.			
Water observed in open borehole at approximately 15 cm.			
Note: This soil is similar to the Crossiadore series. This soil is somewhat poorly drained. Described by MCR April 9, 2005.			

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Parker Creek # 6 Easting 1444396 Northing 405938						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-8	sil/l; 10% clay	10YR 3/2			1% fine and very fine faint 10YR 3/4 pore linings of Fe
BA	8-17	sil; 12% clay	2.5Y 4/4			10% faint 10YR 4/4 and 1% distinct 10YR 4/6 soft masses of Fe
Bt1	17-40	sil/l; 25% clay	2.5Y 5/4			5% distinct 2.5Y 5/2 depletions of Fe; 10% distinct 7.5YR 4/6 soft masses of Fe
Bt2	40-60	sil/l; 26% clay	10YR 5/6			8% distinct 5Y 5/3 depletions of Fe; 15% faint 7.5YR 4/6 soft masses of Fe
2BC1	60-93	fsl; 14% clay	5Y 6/3			15% faint 5Y 6/2 depletions of Fe; 25% prominent 10YR 5/6 soft masses of Fe
2BC2	93-115	lfs; 4% clay	2.5Y 5/6			15% distinct 5Y 6/3 depletions of Fe; 20% faint 10YR 5/6 soft masses of Fe
2BC3	115-140	lfs; 5% clay	5YR 4/3 (40%)			30% faint 5Y 6/2 depletions of Fe; 30% 2.5Y 5/4 soft masses of Fe
3Cg	140-185+	lfs; 3% clay	5GY 3/3 (50%) and 5GY 4/3 (50%)			
Water observed in open borehole at approximately 29 cm.						
Note: This soil is formed in loess (60 cm) overlying glauconitic sediments and is similar to the Crossiadore series. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 7 Easting 1444388 Northing 406041						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-6	sil; 11% clay	10YR 3/2			
AB	6-23	sil; 10% clay	2.5Y 5/3.5			5% faint 10YR 5/6 soft masses of Fe
BA	23-33	sil; 17% clay	2.5Y 5/4			25% fine and medium faint 10YR 5/6 soft masses of Fe
Bt1	33-55	sil; 26% clay	10YR 5/8 (40%)			35% prominent 5Y 6/2 and 25% 5Y 6/4 depletions of Fe
Bt2	55-100	sicl; 29% clay	2.5Y 5/1 (45%)			30% prominent 10YR 5/8 and 25% distinct 2.5Y 5/6 soft masses of Fe.
2BC	100-150	fsl; 12% clay	2.5Y 5/4			25% distinct 5Y 6/2 depletions of Fe; 30% prominent 10YR 5/8 soft masses of Fe
Note: This soil is similar to the Crossiadore series. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 8 Easting 1444267 Northing 406093						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-5	sil; 10% clay	10YR 3/2			
AB	5-14	sil; 12% clay	2.5Y 4/2			15% distinct 10YR 3/4 and 10% prominent 7.5YR 3/4 soft masses of Fe
BA	14-28	sil; 22% clay	2.5Y 5/4			8% faint 2.5Y 5/2 depletions of Fe; 10% distinct 10YR 5/6 soft masses of Fe
Btg1	28-73	sicl; 28% clay	2.5Y 6/2			30% prominent 10YR 5/6 soft masses of Fe
Btg2	73-95	sicl; 28% clay	2.5Y 5/1			25% distinct 2.5Y 5/4 and 15% prominent 7.5YR 4/6 soft masses of Fe
2BC	95-110+	l/scl; 20% clay	10YR 5/4			10% distinct 2.5Y 5/1 depletions of Fe; 20% faint 10YR 5/6 and 5% distinct 7.5YR 4/6 soft masses of Fe
This soil meets FI F3 depleted matrix						
Note: This soil is similar to the Deale series but lacks a buried A horizon. This soil is classified as an Aeris Endoaquult. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 9 Easting 1444173 Northing 406036						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-5	sil; 10% clay	10YR 2/2			
AB	5-20	sil; 10% clay	2.5Y 5/3			10% medium faint 2.5Y 5/2 depletions of Fe; 15% fine distinct 10YR 5/6 soft masses of Fe
BA	20-30	sil; 22% clay	2.5Y 5/4			3% distinct 2.5Y 6/2 depletions of Fe; 10% fine distinct 10YR 5/6 soft masses of Fe
Bt	30-60+	sicl; 29% clay	2.5Y 5/4			5% distinct 2.5Y 6/2 depletions of Fe; 10% fine and medium distinct 10YR 4/6 soft masses of Fe
Note: This soil is similar to the Crossiadore series. This soil was classified as an Aquic Hapludult. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 10 Easting 1444288 Northing 405732						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-10	sil; 11% clay	10YR 2/2			
Ap	10-24	sil; 13% clay	2.5Y 3/3			1% fine faint 10YR 3/3 soft masses of Fe
2BA	24-45	l; 20% clay	2.5Y 5/4			20% faint 10YR 4/4 soft masses of Fe
2Bt1	45-85	cl; 28% clay	10YR 4/4			3% prominent 5GY 3/3 and 3% faint 2.5Y 4/3 depletions of Fe
2Bt2	85-115	scl; 27% clay	10YR 4/4 (40%) with 25% dark 10YR 2/1 zones			25% prominent 5GY 3/3 depletions of Fe; 10% faint 7.5YR 3/4 soft masses of Fe
2Btg	115-145	scl; 30% clay	5GY 3/3			10% faint 5GY 4/3 20% prominent 7.5YR 4/6 and 5% prominent 7.5YR 3/4 soft masses of Fe
2BC	145-160+	lfs/fsl; 11% clay	5GY 4/3			15% prominent 7.5YR 4/6 soft masses of Fe
Note: This soil formed in loess (45cm) overlying glauconitic sediments and is similar to the Adelpia series. This soil is moderately well drained. A few oyster shells were observed at the base of the Ap horizon. Described by MCR April 9, 2005.						

Parker Creek # 11 Easting 1444216 Northing 405988						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
A	0-4	sil/l; 10% clay	10YR 2/2			
Ap	4-28	sil/l; 12% clay	2.5Y 4/3			25% fine and medium faint 10YR 4/4 soft masses of Fe
BA	28-45	sil/l; 16% clay	2.5Y 5/6			20% distinct 2.5Y 5/3 and 5% prominent 2.5Y 6/1 depletions of Fe; 10% faint 10YR 5/6 soft masses of Fe
Bt	45-100	sicl; 29% clay	2.5Y 5/4			25% medium distinct 2.5Y 5/2 depletions of Fe; 15% distinct 10YR 5/6 soft masses of Fe
2BC	100-140	l/fsl; 16% clay	2.5Y 5/4			25% medium distinct 5Y 5/2 depletions of Fe; 20% fine and medium distinct 10YR 5/6 soft masses of Fe
Note: This soil is similar to the Crossiadore series. This soil is classified as an Aquic Hapludult. This soil is somewhat poorly drained. Described by MCR April 9, 2005.						

Parker Creek # 12    Easting 1444231    Northing 405747				Quick Note		
This soil is similar to pedon #10, although not quite as wet.						
Note: This soil is similar to the Adelphia series. This soil is moderately well drained. Described by MCR April 9, 2005.						

Parker Creek # 13    Easting 1444258    Northing 405805				Quick Note		
The upper 25 cm of this soil is comprised of fill material with approximately 50% of the volume being pieces of asphalt, brick and gravel, not native to the soils of the area. Down to a depth of approximately 60 cm, the soil is mainly silty in nature at which point the soil materials become derived from glauconitic sediments. In this respect this soil is similar to pedon #6, however, this soil appears to be better drained than pedon #6. This soil is borderline moderately well to well drained based upon low chroma (2 or less) redox depletions beginning at around 90 cm.						
Note: This soil is similar to the Adelphia series, except for the silty component of the upper horizons and the fill/urbic component in the A horizons. This soil is moderately well drained. Described by MCR April 9, 2005.						

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Parker Creek # 14 Easting 1444289 Northing 405866						
Horizon	Depth (cm)	Texture (Field Estimate)	Color	Structure	Consistence	Redox Features or other notes
I	0-18	l; 25% clay	2.5Y 3/3			15% faint 2.5Y 5/3 depletions of Fe; 10% distinct 7.5YR 5 <sup>^</sup> soft masses of Fe
II	18-40	cl; 32% clay	10YR 4/4			5% distinct 2.5Y 5/1 and 10% distinct 2.5Y 5/2 depletions of Fe; 20% distinct 10YR 5/8 soft masses of Fe
III	40-75	sil; 24% clay	2.5Y 5/4			4% fine distinct 5Y 5/2 depletions of Fe; 5% fine distinct 7.5YR 4/6 pore linings of Fe
IV	75-90	cl; 30% clay	2.5Y 5/6			10% prominent 2.5Y 5/2 and 15% prominent 10Y 5/1 depletions of Fe; 10% faint 10YR 5/6 soft masses of Fe
2Bt	90-120	sicl; 33% clay	10YR 5/6			15% prominent 5Y 5/1 depletions of Fe; 10% faint 10YR 5/6 and 10% faint 10YR 4/4 soft masses of Fe
3BCg	120-155	l/fsl/scl; 20% clay	2.5Y 6/2			10% faint 2.5Y 7/2 depletions of Fe; 15% prominent 10YR 5/6 soft masses of Fe
The upper 90 cm of this soil profile has been disturbed by human activity, probably during construction of the existing house, and therefore was not horizonated. Beneath 90 cm is the remains of a natural soil, that may have been in the Crosiadore series which had formed in loess overlying glauconitic sediments.						
Note: Given the limitations associated with interpreting redox features in disturbed materials, this soil is probably somewhat poorly drained. Described by MCR April 9, 2005.						

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## DETAILS & SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL, SOIL DISTURBANCES OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SLOPES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

### 1. PERMANENT SEEDING

- A. SOIL TESTS, LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF INITIAL ROUGH GRADING OR AS RECOMMENDED BY THE SEDIMENT CONTROL INSPECTOR. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.
1. OCCURRENCE OF ACID SULFATE SOILS (GRAYISH-BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKPILING OF MATERIAL IS ALLOWED. IF NEEDED, SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6-WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

- A. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0  
B. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM)  
C. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE-GRAINED MATERIAL (> 30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOESS/CLAY OR SERICIA LESPEDEZA IS TO BE PLANTED. THEN A SANDY SOIL (< 30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.  
D. SOIL SHALL CONTAIN 1% MINIMUM ORGANIC MATTER BY WEIGHT  
E. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION  
F. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL OR AMENDMENTS MADE AS RECOMMENDED BY A CERTIFIED AGRONOMIST.
- B. SEEDBED PREPARATION AREA TO BE SEEDBED SHALL BE LOOSE AND FRAGILE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-10-10 FERTILIZERS PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES ON SLOPES FLATTER THAN 3:1.
- C. SEEDING: APPLY 5.6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MIST FIRM SEEDBED WITH A CYCLONE SEEDER, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER MIXES ARE TO BE USED, SELECT FROM TABLE 25, ENTITLED "PERMANENT SEEDING FOR LOW MAINTENANCE AREAS" FROM THE CURRENT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MIXES SUITABLE FOR THIS ARE 1, 2 AND 9. MIXES 5-7 ARE SUITABLE IN NON-MOWABLE SITUATIONS.
- D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDBED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING.

MULCH SHALL BE UNROOTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES), IF A MULCH-ANCHORING TOOL IS USED. APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOxious WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES.

E. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:

- (i) USE A MULCH-ANCHORING TOOL, WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH. HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY.
- (ii) WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 90 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- (iii) LIQUID BINDERS MAY BE USED. APPLY AT HIGHER RATES AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND IN CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.
- (iv) LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

### 2. TEMPORARY SEEDING

LIME: 100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET.  
FERTILIZER: 15 POUNDS OF 10-10-10 PER 1,000 SQUARE FEET.  
SEED: PERENNIAL RYEGRASS 40 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH NOVEMBER 1)  
MILLET/0.82 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15)  
MULCH: SAME AS 1-D AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL FILL, UNROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 AS PER ANNE ARUNDEL COUNTY CODE ARTICLE 21, SECTION 2-308, AND COMPACTED TO 90% DENSITY. COMPACTION TO BE DETERMINED BY ASTM D1557-67 (MODIFIED PROCTOR). ANY FILL WITHIN THE BUILDING AREA IS TO BE COMPACTED TO A MINIMUM OF 98% DENSITY AS DETERMINED BY METHODS PREVIOUSLY MENTIONED. FILLS FOR POND EMBRASMENTS SHALL BE COMPACTED AS PER MD-376 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLIPAGE.

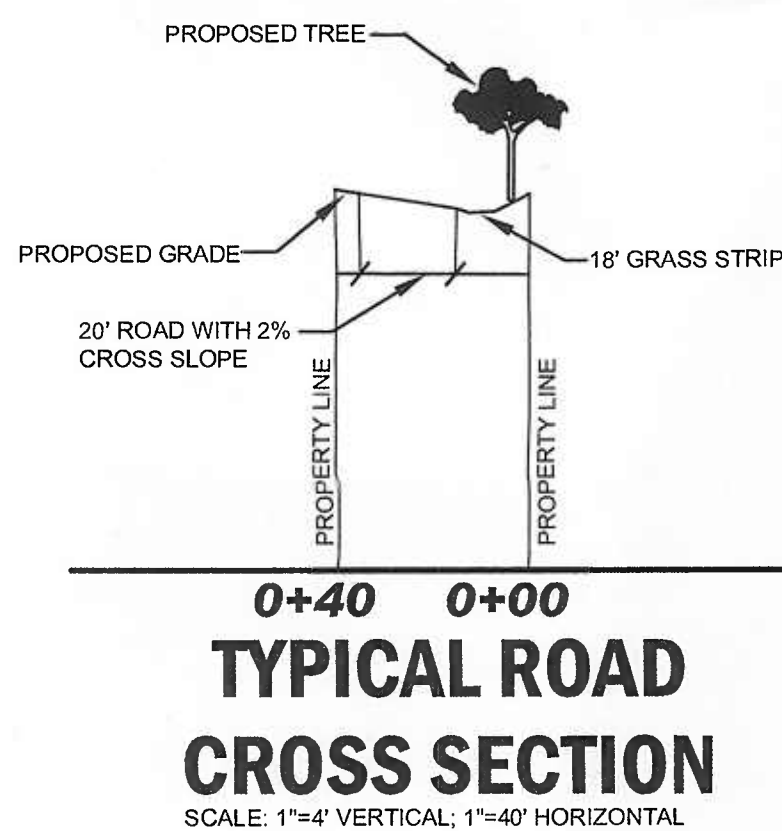
### 4. PERMANENT SOD

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. SEEDBED PREPARATION FOR SOD SHALL BE AS NOTED IN SECTION (B) ABOVE. PERMANENT SOD IS TO BE TALL FESCUE, STATE APPROVED SOD. LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY BUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL SOD TO INSURE POSITIVE ROOT CONTACT WITH SOIL. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE INSTALLED ON FROZEN GROUND. SOD SHALL NOT BE TRANSPORTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO ENSURE ESTABLISHMENT OF SOD.

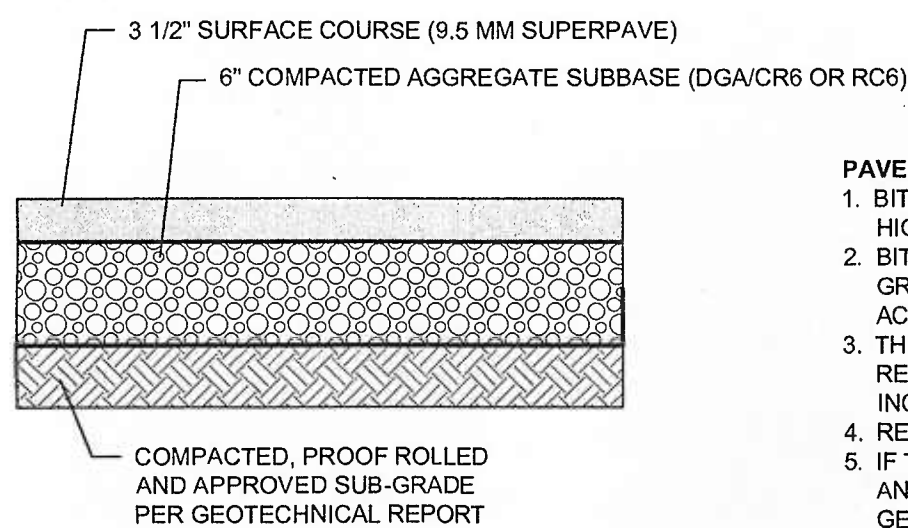
### 5. MINING OPERATIONS

SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING: SEEDING DATES AND MIXTURES; FOR SEEDING DATES OF: FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 31, USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICIA LESPEDEZA AT THE MINIMUM RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

6. TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATIONS FOR TOPSOIL FROM THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. NOTE: PROJECTS WITHIN 4 MILES OF THE BWI AIRPORT WILL NEED TO ADHERE TO MARYLAND AVIATION ADMINISTRATION'S SEEDING SPECIFICATION RESTRICTIONS.



**0+40 0+00**  
**TYPICAL ROAD**  
**CROSS SECTION**  
SCALE: 1"=4' VERTICAL, 1"=40' HORIZONTAL



**TYPICAL LIGHT DUTY PAVEMENT**  
**DETAIL**

### PAVEMENT NOTES

- BITUMINOUS CONCRETE BAND DESIGNATIONS ARE MARYLAND STATE HIGHWAY ADMINISTRATION.
- BITUMINOUS CONCRETE, STABILIZED AGGREGATE BASE COURSE DENSE GRADED AGGREGATE AND/OR GRAVEL SHALL BE MIXED AND PLACED IN ACCORDANCE WITH LATEST SPECIFICATIONS.
- THE CONTRACTOR SHOULD BE FAMILIAR WITH THE SITES GEOTECHNICAL REPORT PREPARED BY INDEPENDENT CONSULTANTS AND ENGINEERS, INC.
- REFER TO SITE PLAN FOR LIMITS OF PAVEMENT.
- IF THE STONE BASE IS TO BE HEAVILY TRAFFICKED DURING CONSTRUCTION AND LEFT EXPOSED TO THE ELEMENTS, AT THE RECOMMENDATION OF THE GEOTECH, A SEPARATION FABRIC AND AN EXTRA R6 (9") OR GAB/C6 (7") MAY BE REQUIRED.

## 21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

### DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

### PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

### CONDITIONS WHERE PRACTICE APPLIES

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:  
A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCT: VEGETATIVE GROWTH.  
B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.  
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.  
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

### CONSTRUCTION AND MATERIALS SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 IN IN DIAMETER.
- II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

III. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

- A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
- B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
- D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

### V. TOPSOIL APPLICATION

- I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

- II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.

- III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

- IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

- VI. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

- I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.

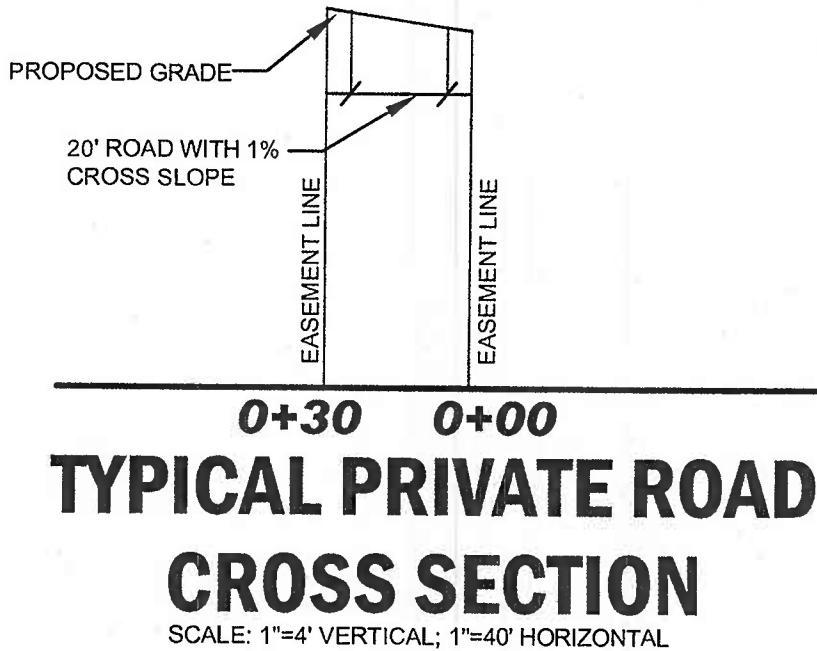
B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.

C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.

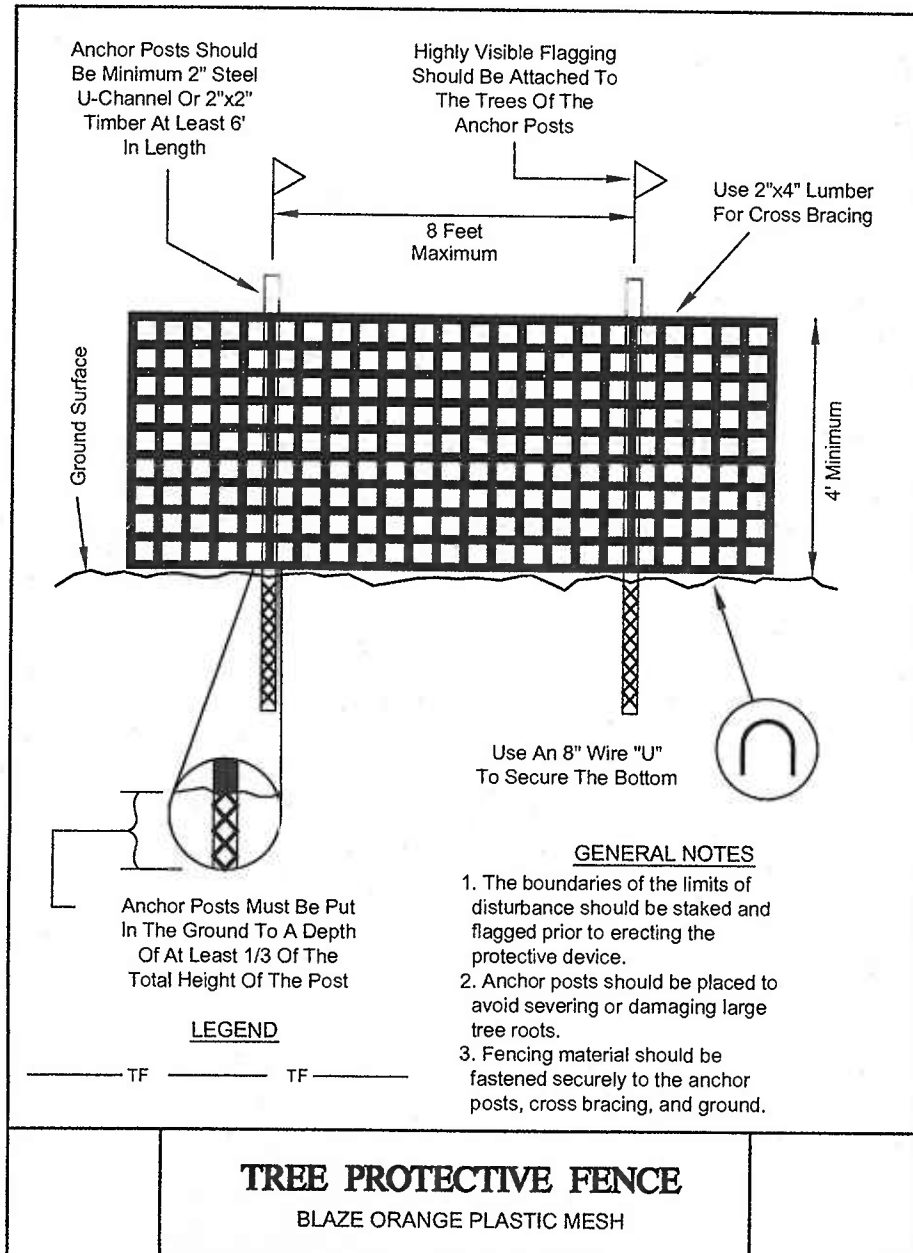
- II. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

### REFERENCES:

GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

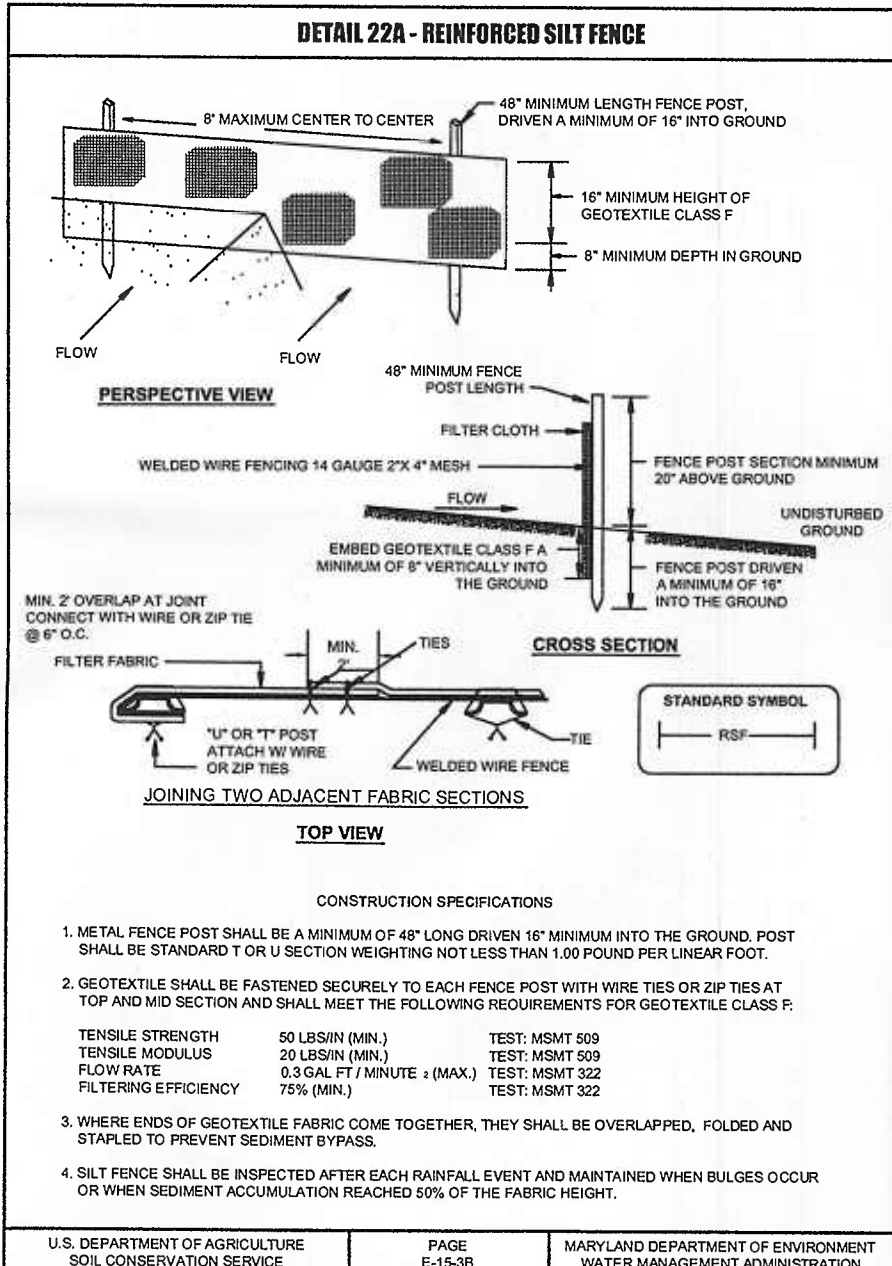


**0+30 0+00**  
**TYPICAL PRIVATE ROAD**  
**CROSS SECTION**  
SCALE: 1"=4' VERTICAL, 1"=40' HORIZONTAL

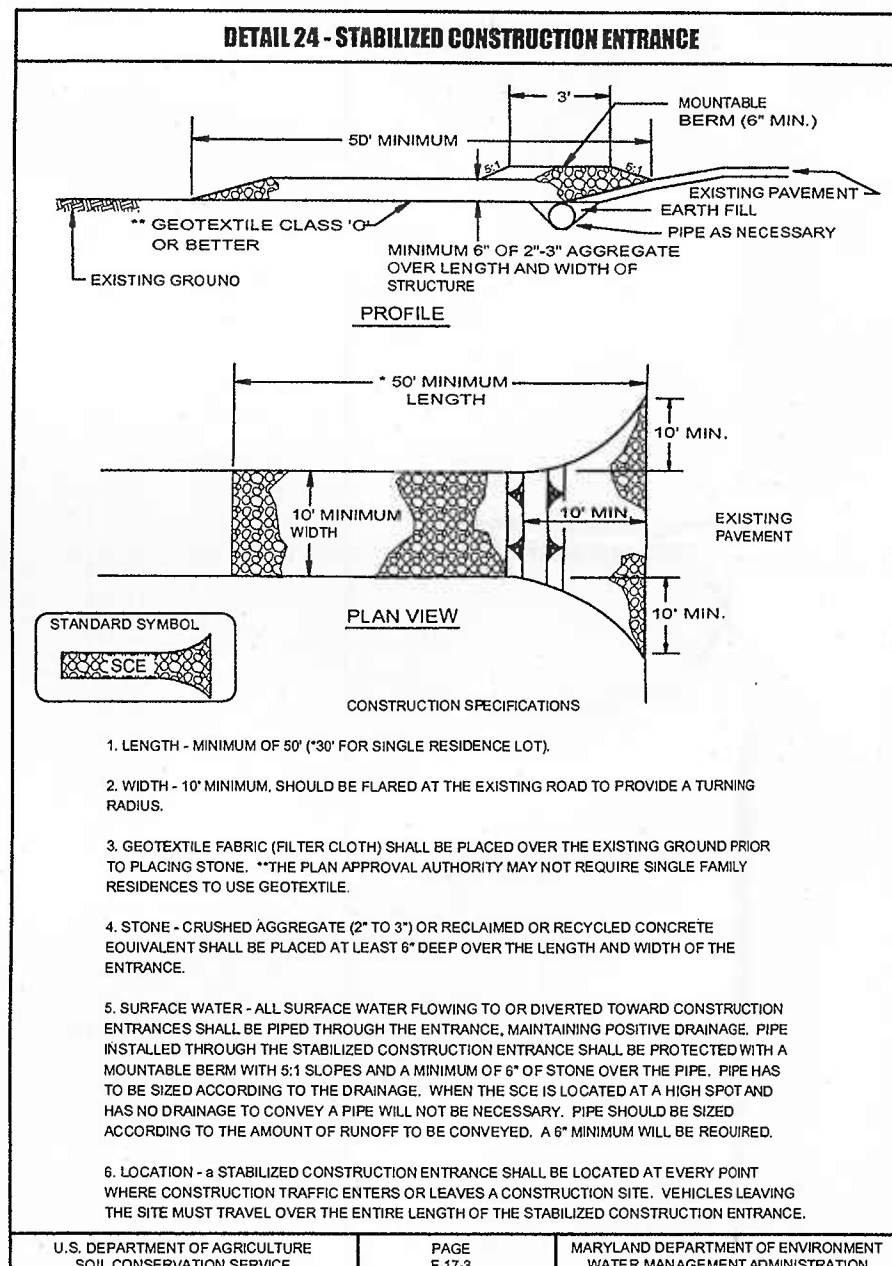


### TREE PROTECTIVE FENCE

BLAZE ORANGE PLASTIC MESH



CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80"	90	190



CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80"	90	190

## 24.0 MATERIALS SPECIFICATIONS TABLE

### 27 GEOTEXTILE FABRICS

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80"	90	190

\* US STD SIEVE CW-02215

THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

- APPARENT OPENING SIZE MSMT 323

- GRAB TENSILE STRENGTH ASTM D 1682: 4x8" SPECIMEN, 1x2" CLAMPS, 12"/MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.

- BURST STRENGTH ASTM D 3786

THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 85% BY WEIGHT OF POLYOLEPHINS, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE FABRIC SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE.

IN ADDITION, CLASSES A THROUGH E SHALL HAVE A 0.01 CM/SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPARENT MINIMUM ELONGATION OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

### SILT FENCE

CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50 LB./IN. MINIMUM TENSILE STRENGTH AND A 20 LB./IN. MINIMUM TENSILE MODULES WHEN TESTED IN ACCORDANCE WITH MSMT 509. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL./FT. 2MIN. FLOW RATE AND SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.

GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

## TABLE 28 STONE SIZE

	SIZE RANGE	D <sub>50</sub>	D <sub>50</sub>	AASHTO	WEIGHT
NUMBER 57	3/8"-1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2"-3"	2 1/2"	3"	M-43	N/A
RIPRAP **	4"-7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150 LB MAX
CLASS II	N/A	16"	24"	N/A	700 LB MAX
CLASS III	N/A	23"	34"	N/A	2000 LB MAX

\* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.

\*\* THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED. THE STATE HIGHWAY ADMINISTRATION DESIGNATION FOR THIS STONE IS STONE FOR GABIONS (905.01.04).

NOTE: RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR ALL STONE CLASSIFICATIONS. RECYCLED CONCRETE EQUIVALENT SHALL BE CONCRETE BROKEN INTO THE SIZES MEETING THE APPROPRIATE CLASSIFICATION, SHALL CONTAIN NO STEEL REINFORCEMENT, AND SHALL HAVE A DENSITY OF 150 POUNDS PER CUBIC FOOT.

DETAILS & SPECIFICATIONS  
OF THE FINAL DEVELOPMENT PLANS FOR  
**PARKER CREEK**  
A MAJOR SUBDIVISION  
TAX ACCOUNT # 07-000-01306010  
TAX MAP 78, GRID 2, PARCEL 308  
DEALE, MD 20751 ZONED: R-5 AND OS  
SEVENTH DISTRICT ANNE ARUNDEL COUNTY, MD

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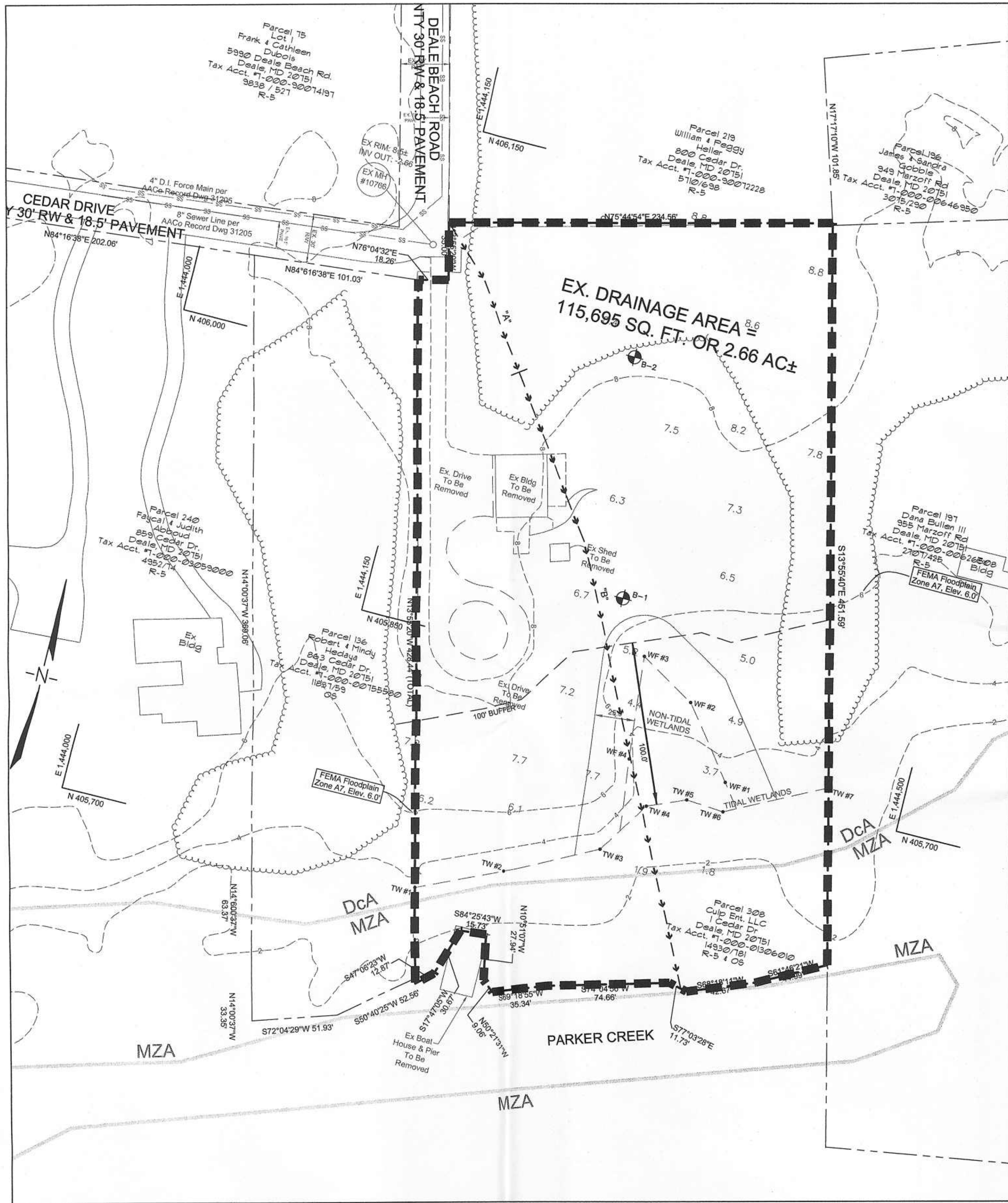
**Bay Engineering Inc.**  
Engineers, Planners and Surveyors

Site 6-12-07 :Xref/ Images

DATE AUGUST 2009  
Job Number 04-1159  
Scale N/A  
Drawn By RJW  
Designed By JBS  
Approved By JBS  
Folder Reference BAILEY PARKER CREEK

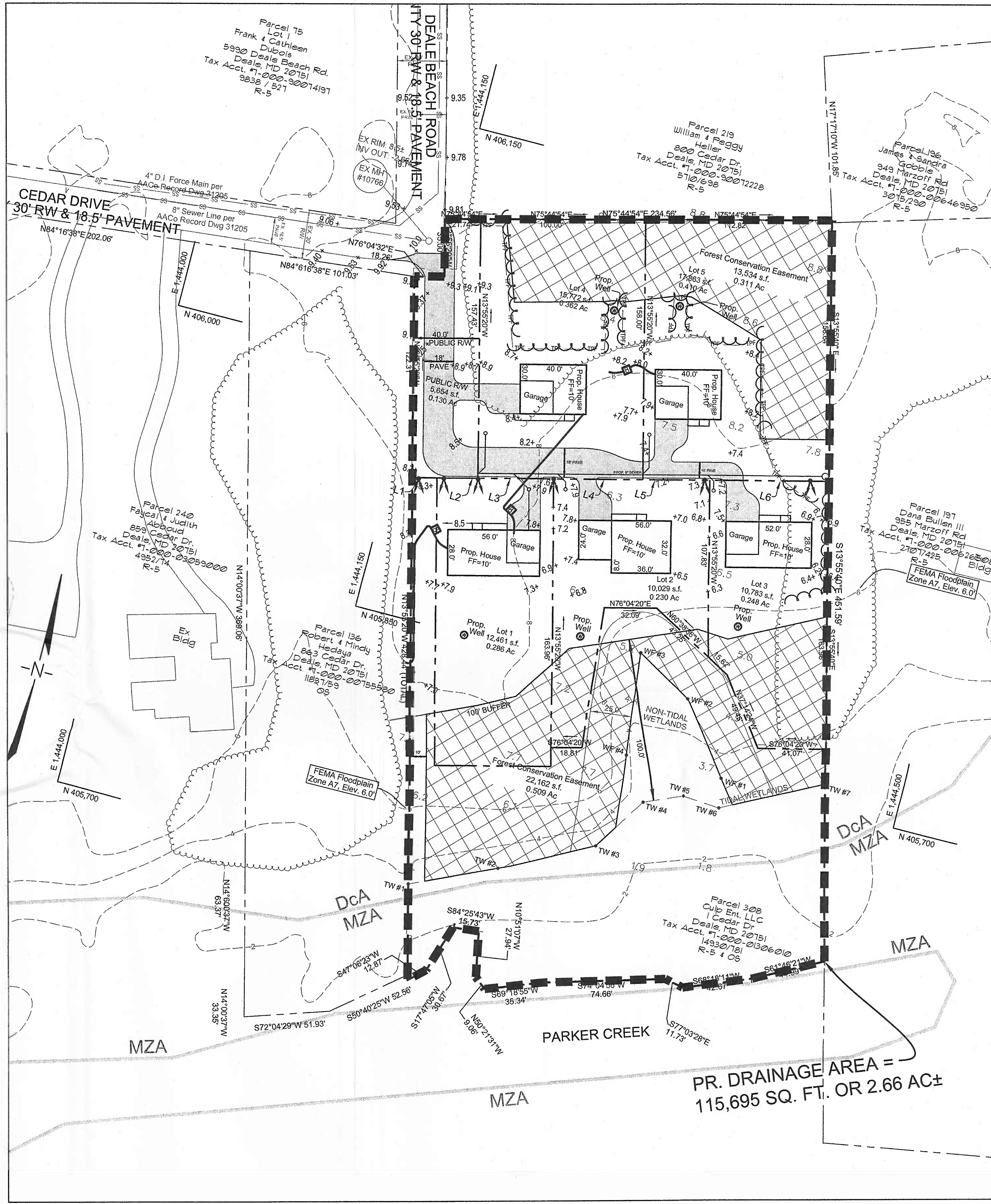
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File No. 04-1199





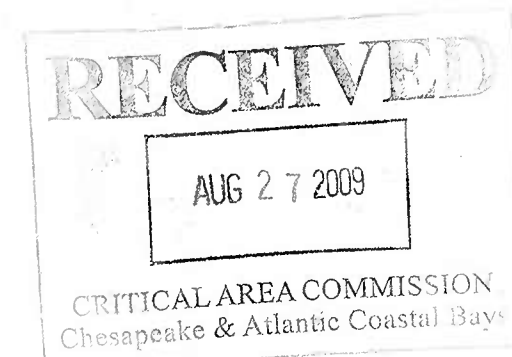
**EXISTING DRAINAGE AREA MAP**

SCALE: 1"=40'



**PROPOSED DRAINAGE AREA MAP**

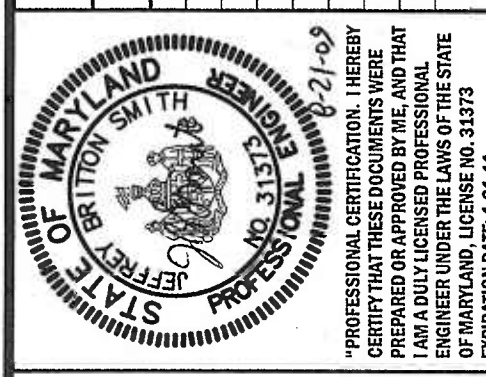
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**PARKER CREEK**  
A MAJOR SUBDIVISION  
TAX ACCOUNT # 07-00001306010  
TAX MAP 78, GRID 2, PARCEL 308  
DEALE, MD 20751 ZONED: R-S AND OS  
SEVENTH DISTRICT ANNE ARUNDEL COUNTY, MD

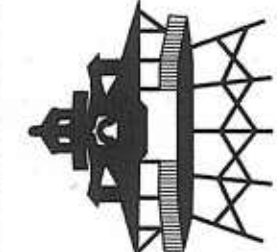
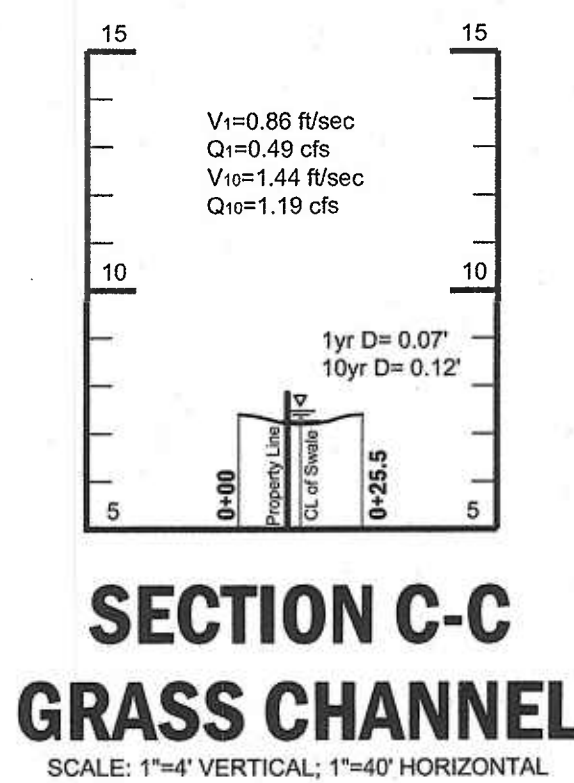
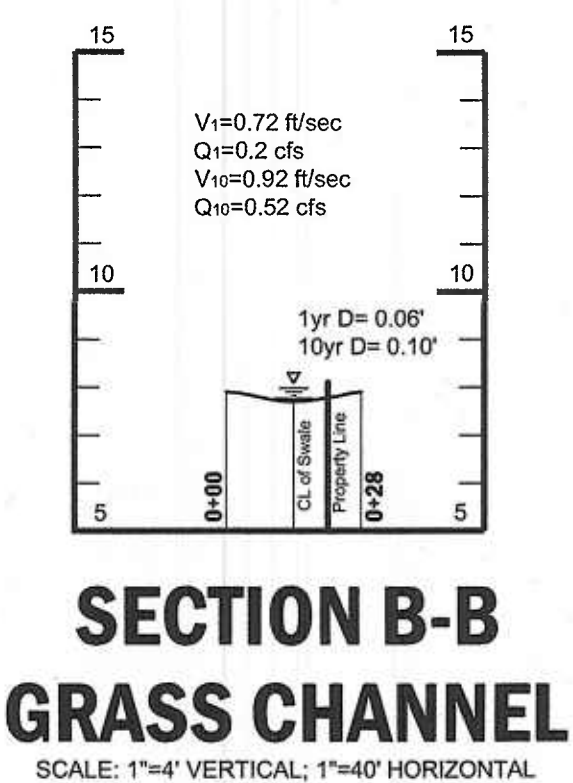
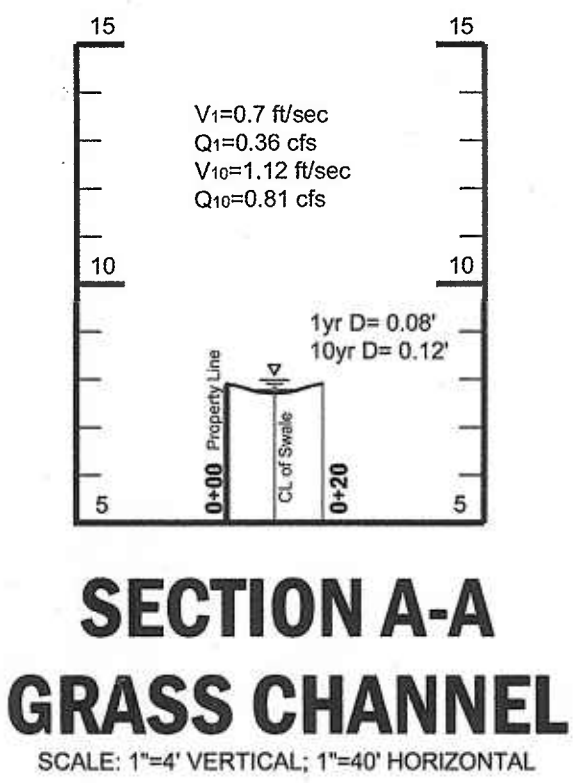
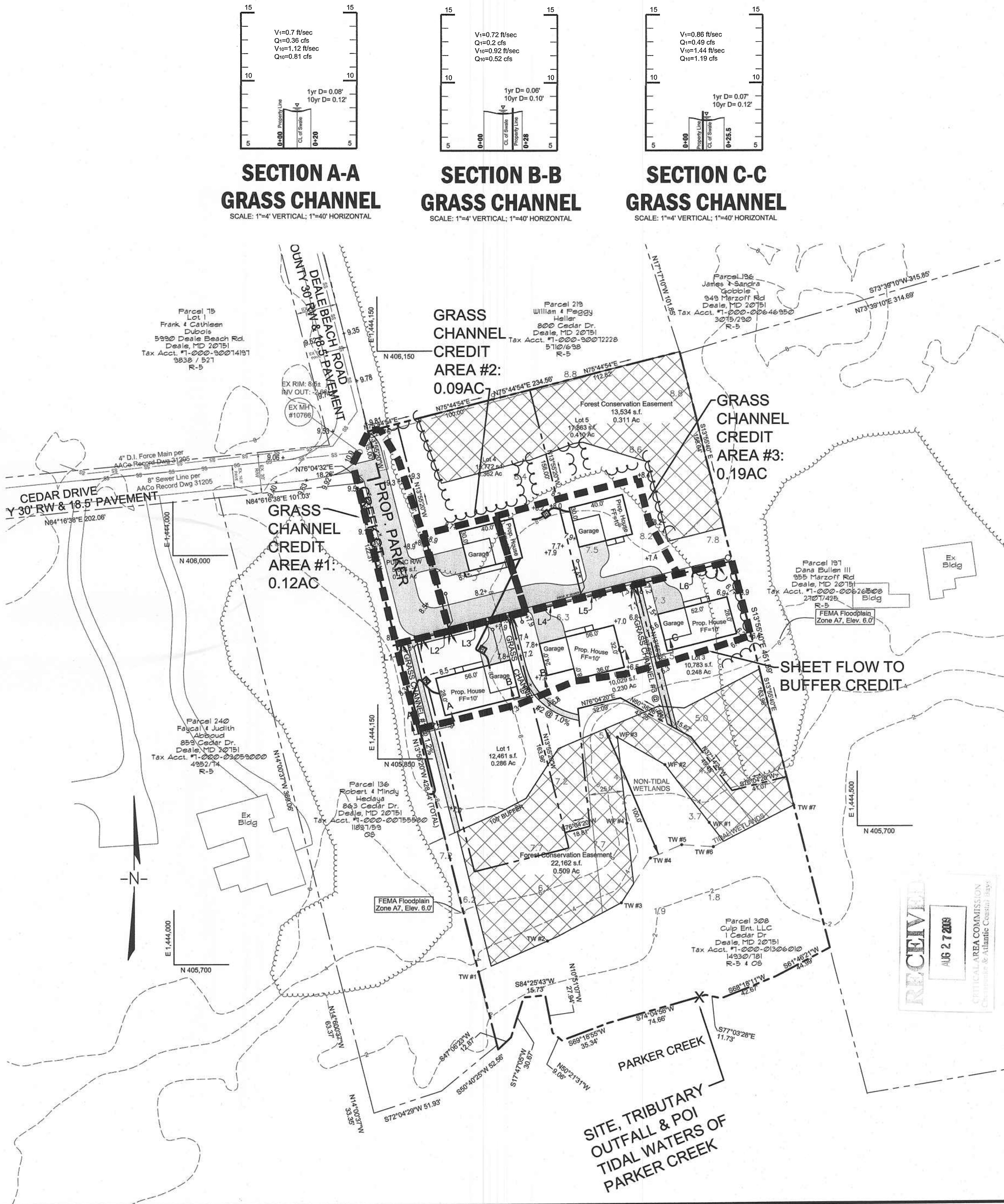
Date  
AUGUST 2009  
Job Number  
04-1199  
Scale  
AS SHOWN  
Drawn By  
JBS  
Designed By  
JBS  
Approved By  
JBS  
Folder Reference  
BAILEY PARKER CREEK

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www.bayengineering.com



Rev. #	By	Date	Description





**Bay Engineering Inc.**  
 Engineers, Planners and Surveyors

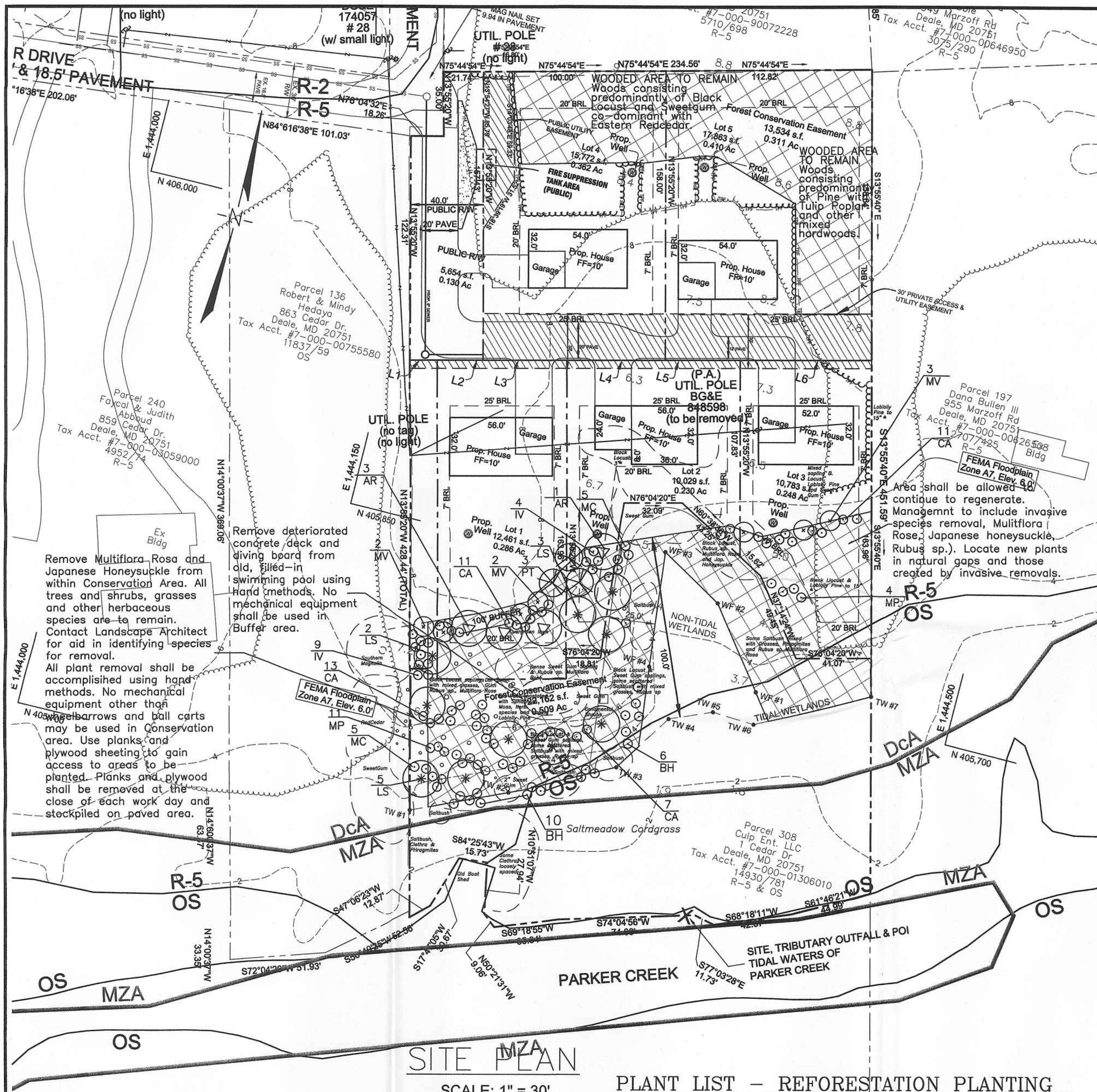
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 email: info@bayengineering.com  
 www.bayengineering.com

Date	AUGUST 2009
Job Number	04-1199
Scale	AS SHOWN
Drawn By	RJW
Designed By	JBS
Approved By	JBS
Folder Reference	BAILEY PARKER CREEK

SWM PRACTICE PLAN  
 OF THE FINAL DEVELOPMENT PLANS FOR  
**PARKER CREEK**  
 A MAJOR SUBDIVISION  
 TAX ACCOUNT # 07-000-0136010  
 TAX MAP 78, GRID 2, PARCEL 308  
 DEALE, MD 20751 - ZONED: R-3 AND OS  
 SEVENTH DISTRICT - ANNE ARUNDEL COUNTY, MD

Sheet No.	8 OF 8
File No.	04-1199





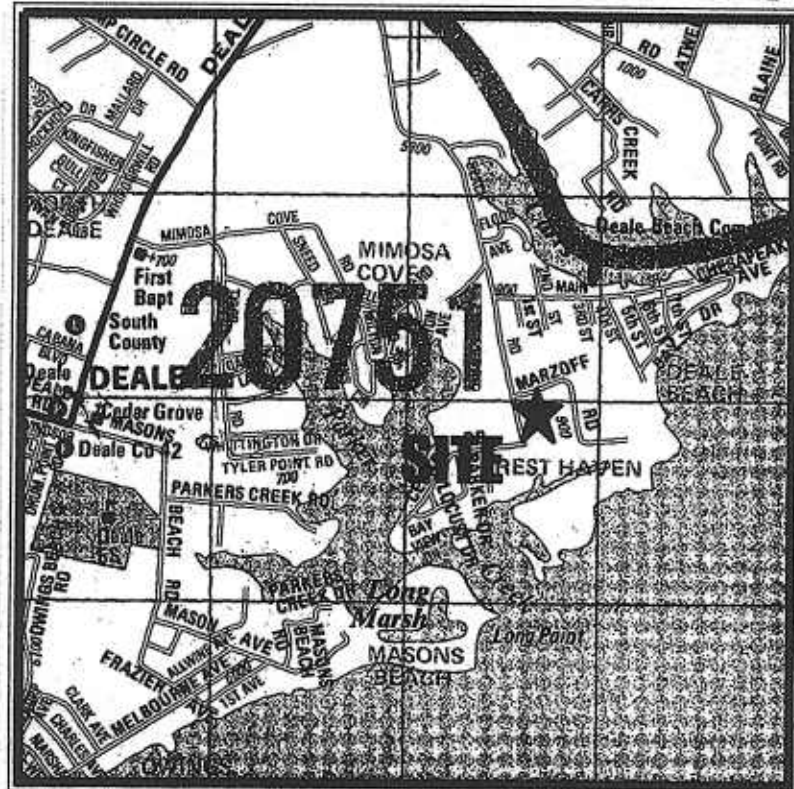
### REFORESTATION STATEMENT

The area proposed for reforestation is 22,162sf. Since the date of the Critical Area report and the original date of this plan submission, significant regeneration has taken place, for the most part, Black Locust. The approximate existing vegetation has been shown hereon, per 12-15-08.

The proposed reforestation is reduced to reflect this regeneration. Infill planting is proposed with species as found on site and suitable for tidal wetland areas. Management and monitoring of invasive vines is also proposed.

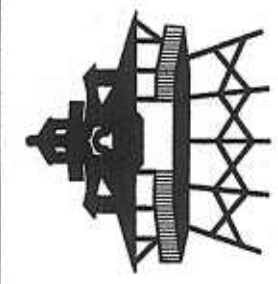
### PLANTING NOTES- REFORESTATION

- All Planting practices shall conform to 'State Forest Conservation Technical Manual' specifications.
- Planting shall be performed in the periods between March 1 and June 1 or September 15 and November 15.
- All plants shall be full-formed, with a shape consistent with the species and conform to the standards as set forth in the current edition of 'American Nursery Standards'.
- Any substitutions required due to lack of availability must be approved by the Environmental Department of Anne Arundel County Planning and Code Enforcement prior to the commencement of any planting operations.
- All plants shall be certified free of pest and diseases. Supply delivery tickets for all plants to be used to Landscape Architect. Contact Landscape Architect a minimum of 7 working days prior to planting to inspect all plant material to be used. Any plant material rejected shall be removed from site and replaced by the contractor at no additional cost.
- All plants shall be nursery grown. No field collected plants may be used.
- All container grown stock shall be firmly rooted in. Ball and burlap or wire basket material shall have a firmly attached root ball.
- Place plants evenly over entire planting area prior to digging. Avoid disturbance of existing tree roots and field adjust plan locations as necessary to avoid conflicts.
- All plants shall be watered during storage and protected from drying winds and shaded to prevent sunscald.
- Plant according to Details, this sheet and in accordance with the above-mentioned State Forest Conservation Technical Manual.
- Provide 'REPEL-X' tablets, or equivalent, and slow-release fertilizer in each planting pit in accordance with manufacturers specifications.
- Fill planting pit to about 2/3rds full with prepared planting soil and compost, (where required). Tamp firmly and water thoroughly.
- After filling planting pit to final grade, water thoroughly, then install a minimum 2" depth and maximum 3" depth of aged, shredded hardwood bark mulch.
- All water for initial planting and subsequent maintenance period shall be provided by Contractor.
- Site shall be left free of any excess material or debris after planting operations are completed. Any disturbances to soils surfaces shall be repaired and mulched.
- Any surfaces damaged by Contractor shall be repaired as necessary and to the satisfaction of the Owner/Developer.
- The Contractor is responsible for repairing or replacing any property damaged by the Contractor's operations. Repairs shall take place in a timely fashion and to the satisfaction of the Client / Developer.
- WARRANTY:
- A survival rate of 75% shall be guaranteed by the contractor for a two year period following the completion and acceptance of all planting operations.
- MAINTENANCE:
- Contractor is responsible for watering as necessary to ensure survival of plantings.
- Annual inspections shall be scheduled by the Contractor with the Client / Developer to determine condition of plants.
- Invasive vines and weeds shall be removed once annually from plants.
- Plants with 25% of the crown dead shall be considered dead and to be replaced.
- Survival rate shall be determined during annual inspections and in-kind replacements made as necessary within 30 days.



### VICINITY MAP

SCALE: 1"=2000'  
COPYRIGHT ADC THE MAP PEOPLE  
PERMITTED USE NO. 20403770



**Bay Engineering Inc.**  
Engineers, Planners and Surveyors  
180 Admiral Cochrane Drive, Suite 175  
Annapolis, Maryland 21401  
410.897.8205 fax  
email: info@bayengineering.com  
www.bayengineering.com

### Revisions

Rev. #	Date	Description



**DEBORAH M. SCHWAB**  
Landscape Architect  
409 Washington Street  
Annapolis, MD 21403  
Phone: 410-268-5291  
Fax: 410-267-7808  
Email: dschwab@comcast.net

### Developer

FLAGSHIP DEVELOPMENT, LLC  
705 GIDDINGS AVE., U-1  
ANNAPOLIS, MD 21401

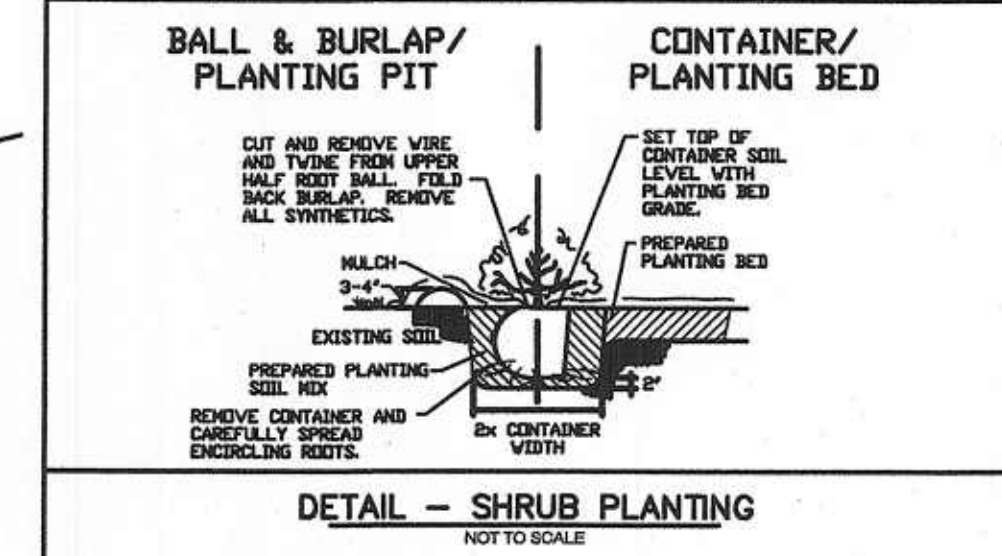
### Owner

CULP ENTERPRISES, LLC  
60 TOM CLEVER  
107 RIDGELY AVE., SUITE 14  
ANNAPOLIS, MD 21401

Date	FEBRUARY, 2009
Job Number	DMS #2007-063
Scale	AS SHOWN
Drawn By	ds
Designed By	ds
Approved By	DMS
Folder Reference	LANDSCAPE/DESIGN/FILES/ENGINEERS/ BAYENG/2007-063/PARKER CREEK

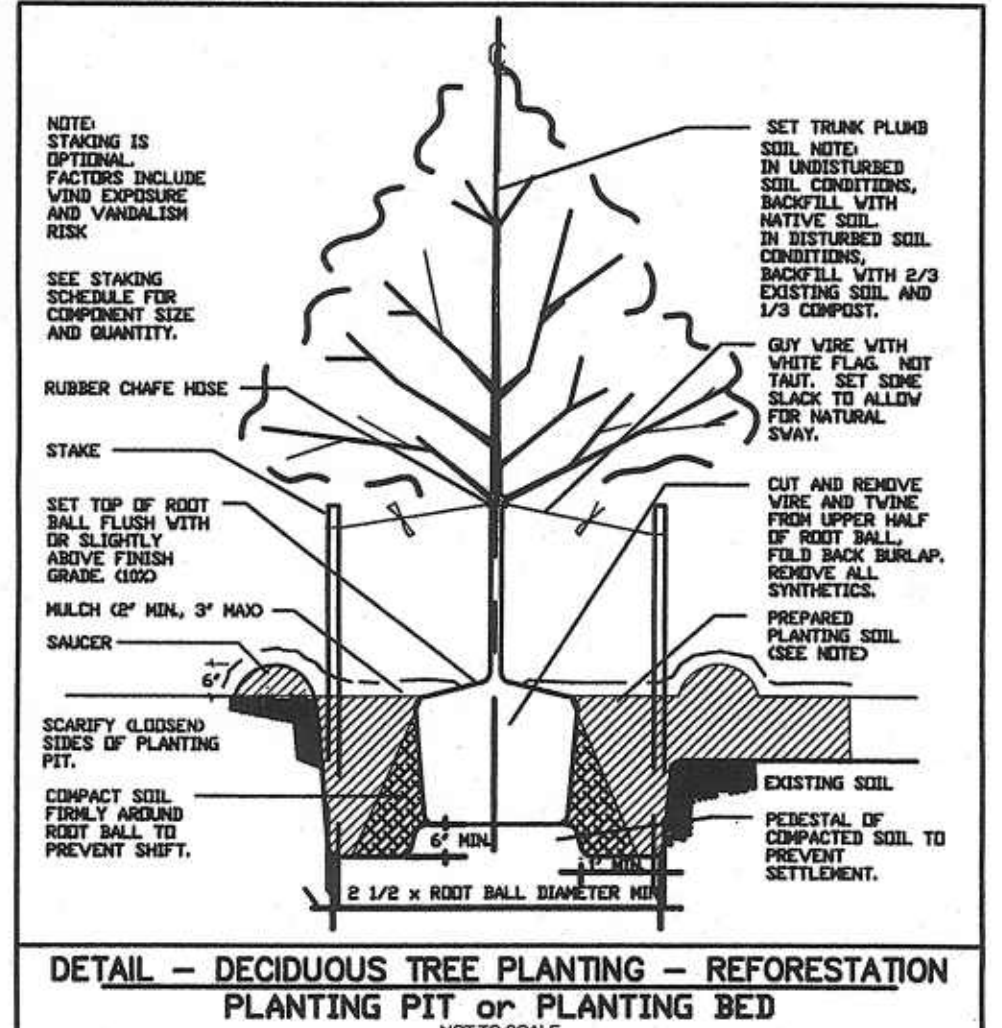
### CRITICAL AREA REFORESTATION PLAN OF THE FINAL DEVELOPMENT PLANS FOR PARKER CREEK A MAJOR SUBDIVISION

TAX ACCOUNT # 07-000-01306010  
TAX MAP 78, GRID 2, PARCEL 308  
DEALE, MD 20751, ZONED R-5 AND OS  
SEVENTH DISTRICT ANNE ARUNDEL COUNTY, MD



Tree Size	Stake Quantity	Stake Size	Wire Size
6 - 10' or 1 - 2" caliper	2	2" x 2" x 6' min.	14 gauge
10 - 12' or 2 - 2 1/2" caliper	2	2" x 2" x 8' min.	14 gauge
12 - 16' or 2 1/2" - 4" caliper	3 deadmen	24" min.	12 gauge
16 - 20' or 4 - 6" caliper	3 deadmen	30" min.	14 gauge
over 20' or over 6" caliper	3 deadmen		3/16" with turnbuckles

**TREE STAKING SCHEDULE**



- NOTES:
- This plan is to be used for reforestation purposes only.
  - All known utilities have been shown.
  - For Landscape Notes & Details, see this sheet.
  - There are no historic features on site.
  - For further site information, see plans by Bay Engineering, Inc.
  - For tree preservation details, see plan by others.

REFORESTATION TABULATION	
CONSERVATION/REFORESTATION AREA	22,162 S.F.
CANOPY TREES REQUIRED (1-2" cal. @ 400 sf)	56
CANOPY TREES PROVIDED (@ 2" cal.)	24
SHRUBS REQUIRED	174
SHRUBS PROVIDED	96

REFORESTATION ADJUSTED FOR APPROX. AREA OF EXIST TREE GROWTH

### PLANT LIST - REFORESTATION PLANTING

SYM	Q'TY	BOTANICAL NAME	COMMON NAME - SIZE	ROOT	SP'C'G
AR	4	Acer rubrum	Red Maple 2" cal., min.	b&b/cont.	20'
BH	16	Baccharis halimifolia	Groundsel Tree 1 gallon	cont.	5'
CA	42	Clethra alnifolia	Summersweet 1 gallon	cont.	5'
IV	23	Ilex verticillata	Winterberry 1 gallon	cont.	5'
LS	10	Liquidambar styraciflua	Sweet Gum 2" cal., min.	b&b/cont.	20'
MC	10	Morella cerifera	Southern Waxmyrtle 1 gallon	cont.	5'
MP	15	Morella pennsylvanica	Northern Bayberry 1 gallon	cont.	5'
MV	7	Magnolia virginiana	Sweetbay MAGnolia 2" cal., min.	b&b/cont.	15'
PT	3	Pinus taeda	Loblolly Pine 2" min., 5-6ft	b&b/cont.	15'

NOTE: ALL PLANTS SUPPLIED SHALL HAVE BEEN GROWN IN SATURATED CONDITIONS



Timothy John Martin, L.S.  
Bay Engineering Inc.  
190 Admiral Cochrane Drive, Suite 175  
Annapolis, Maryland 21401  
(410) 897-9290  
410.897.9295 fax  
email: info@bayengineering.com  
www.bayengineering.com



### DEDICATION BY OWNERS

The undersigned, being all owner(s) of the property shown and described on this record plat, adopt(s) this record plat; establish(es) the minimum building restriction lines; and dedicate(s) all public roads, widening strips, floodplains, easements, and rights-of-way to public use, such lands being deeded to Anne Arundel County, Maryland or to the State, as may be appropriate, prior to or contemporaneous with the recordation of this plat.

To the best of our knowledge, information, and belief, the requirements of §3-108 of the Real Property Article of the State Code, concerning the making of plats and setting of markers, have been satisfied. There are no suits, actions at law, leases, liens, mortgages, trusts, easements, or rights-of-way affecting the property included in this record plat other than the following:  
All owners of the property have affixed their signatures and seals on this record plat.

The open space shown on this plat is set aside for the use of the residents of the subdivision and is conveyed to \_\_\_\_\_ before or with the recordation of this plat.  
(name of homeowner's association)

I (we) assent to and do hereby join in this record plat.

Witness and date:

Owner and date:

Witness

Date

George Bailey

Date

CULP Enterprises, LLC

### TELEPHONE AGREEMENT

These Plats have been approved for recording subject to an agreement with Verizon Maryland Inc. dated \_\_\_\_\_ and recorded among the land records of Anne Arundel County, Maryland in Liber \_\_\_\_\_ at Folio \_\_\_\_\_.

### ELECTRIC SERVICE AGREEMENT

These Plats have been approved for recording subject to an agreement with Baltimore Gas and Electric Company dated \_\_\_\_\_ and recorded among the land records of Anne Arundel County, Maryland in Liber \_\_\_\_\_ at Folio \_\_\_\_\_.

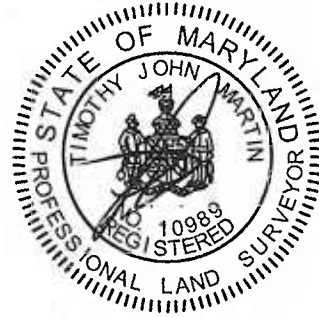
### SURVEYOR'S CERTIFICATE

I certify that this record plat is correct; that it is a subdivision of all of the lands conveyed by Patricia H. Carlo to CULP Enterprises LLC, by a deed dated June 9, 2004 and recorded among the Land Records of Anne Arundel County, Maryland in Liber 14930, Folio 781, and also Liber 16068, Folio 71; and that the requirements of §3-108 of the Real Property Article of the State Code, concerning the making of plats and setting of markers, have been satisfied.

Bay Engineering Inc.

Timothy J. Martin  
Professional Land Surveyor #10989

Date



Timothy John Martin, L.S.  
Bay Engineering Inc.  
190 Admiral Cochrane Drive, Suite 175  
Annapolis, Maryland 21401  
(410) 897-9290

Prepared By :

**Bay Engineering Inc.**  
Engineers, Planners and Surveyors



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Annapolis, Maryland 21401  
410.897.9290  
410.897.9295 fax  
email: info@bayengineering.com  
www.bayengineering.com

### CRITICAL AREA CLEARING AND IMPERVIOUS LOT LIMITATIONS

LOT	SF	ACRES	IMPERVIOUS AREA (SF)	% IMP.	TREE CLEARING (SF)	EX TREE COVERAGE	% OF EXIST. TREE CLEAR
1	12,461	0.286	2,135	17.13%	0	0	0.00%
2	10,029	0.230	2,134	21.28%	0	0	0.00%
3	10,783	0.248	1,950	18.08%	1,397	4,225	5.17%
4	15,772	0.362	3,446	21.85%	3,942	9,798	14.59%
5	17,863	0.410	2,288	12.81%	1,052	12,342	4.04%
OPEN SPACE	43,132	0.990	N/A	N/A	0	0	0.00%
R/W	5,655	0.130	2,791	N/A	649	655	2.40%
TOTAL	115,695	2.66	14,744	12.74%	7,080	27,020	26.20%
TOTAL-LDA	98,302	2.26	14,744	15.00%	7,080	27,020	26.20%
EX. WOODS	27,020	0.62	N/A	N/A	7,080	27,020	26.20%

Clearing limits and impervious coverage limitation and subject to and based upon Articles 17 and 18.

### SITE AREA CALCULATIONS:

RECREATION AREA REQUIRED: 5000 sf  
RECREATION AREA PROVIDED: Boathouse/Pier  
DRY GROUND (ACTIVE) RECREATION AREA REQUIRED: 3750 sf  
DRY GROUND (ACTIVE) RECREATION AREA PROVIDED: Boathouse/Pier

### Allocation Note

This subdivision plat is subject to the requirements of Article 13, Title 5 of the Anne Arundel County Code as it relates to the allocation of wastewater capacity. Failure to comply with the provisions of this law may cause this subdivision plat to become void or cause the properties shown hereon to be subject to a lien for unpaid charges.

### Forest Conservation Easement

There shall be no clearing, trimming, dumping, storage, or structures within the Forest Conservation Easement Areas as shown on this plat and as recorded within the Declaration of Covenants, Conditions, and Restrictions dated \_\_\_\_\_ recorded among the land records of Anne Arundel County, Maryland in Liber \_\_\_\_\_ Folio \_\_\_\_\_.

### Development Plan Note

Development of this subdivision shall be undertaken only in accordance with the approved Final Development Plan on file in the Office of Planning and Zoning. All existing or planted forest, woods, and trees are to be retained as shown on the Final Development Plan.

### LANDSCAPE / SCREENING NOTE

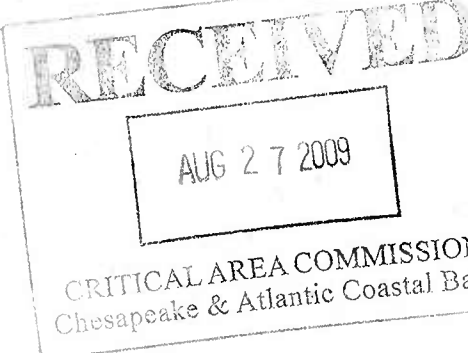
A detailed Landscape/Screening Plan, bond and screening agreement, in accordance with the approved concept plan on file at the office of planning and zoning, shall be submitted prior to issuance of a grading permit. The plan shall be in accordance with all requirements of article 17, title 6 of the Anne Arundel County Code and the landscape manual.

### MODIFICATIONS:

Modification #9345 was denied to waive the sketch process on November 21, 2006 by the Office of Planning and Zoning.

Modification #9533 to construct a non-standard County Road was approved by the Office of Planning and Zoning on May 2, 2007.

Modification # \_\_\_\_\_ to allowed a fee-in-lieu for recreation area was \_\_\_\_\_ by the Office of Planning and Zoning on \_\_\_\_\_.



### Private Access Easement:

The 30 foot wide common access easement shown hereon is intended to provide access to and from lots 1-3 & 5. The owners of these lots are responsible for maintenance of the access easement and are not eligible to receive County services provided to lot owners abutting County roads. See private maintenance agreement recorded in Liber \_\_\_\_\_ Folio \_\_\_\_\_.

### Stormwater Management Note:

Stormwater management is provided on-site. Stormwater management has been provided in accordance with Article 21, Title 3 of the County code. See the approved Final Development Plan on file with Anne Arundel County.

### FOREST CLEARING MITIGATION NOTE

MITIGATION REQUIRED PER 17-8-602(C) (1) ON-SITE REFORESTATION AT 1.5 TIMES THE AREA CLEARED OR 10,620 S.F.


TOTAL CLEARING PROPOSED 7,080 S.F.  
TOTAL ON-SITE REFORESTATION WITHIN FOREST CONSERVATION EASEMENT 22,162 S.F.

A BOND AMOUNT OF \_\_\_\_\_ WAS PAID ON \_\_\_\_\_ PER RECEIPT # \_\_\_\_\_

REFORESTATION WILL OCCUR WITHIN THE FOREST CONSERVATION EASEMENT IN ACCORDANCE WITH THE PLANTING PLAN ON FILE WITH THE FINAL DEVELOPMENT PLAN.

THE REMAINING 10,620 SF OF MITIGATION PER THE CRITICAL AREA COMMISSION WILL BE ADDRESSED VIA A FEE IN LIEU.

### STANDARD RIGHT TO DISCHARGE

The assigns hereby grant the perpetual right-to-discharge the flow of water from such necessary drainage facilities and appurtenances to adequately drain the natural watershed and adjacent properties into existing waterways and/or natural drainage courses and/or upon the existing ground. Such discharge points are indicated by the symbol  respectively as shown graphically on this plat.

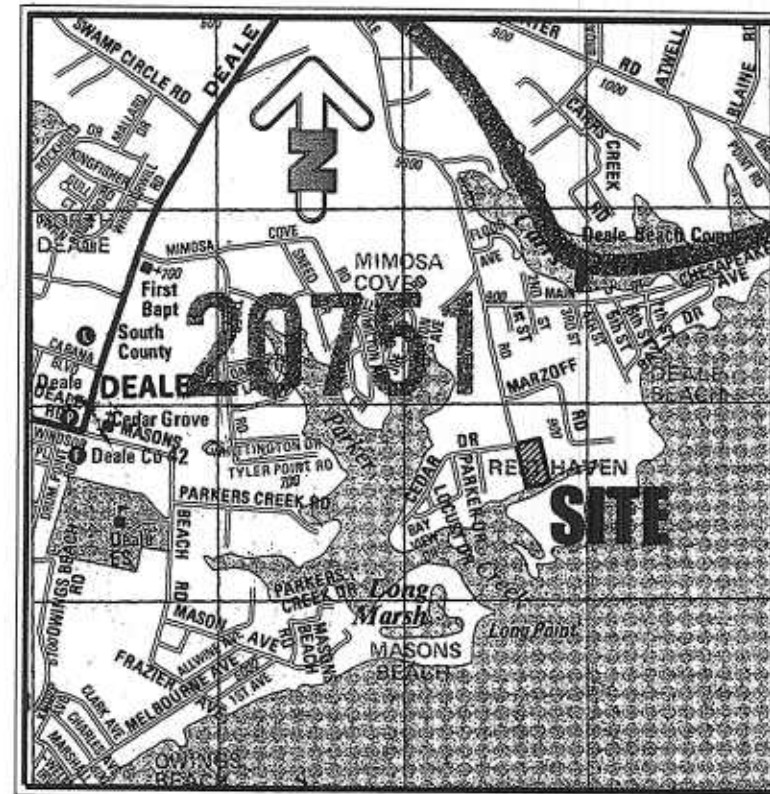
### AREA TABULATIONS

PARKER CREEK	
LOT 1	= 12,461 S.F. or 0.286 Ac.
LOT 2	= 10,029 S.F. or 0.230 Ac.
LOT 3	= 10,783 S.F. or 0.248 Ac.
LOT 4	= 15,772 S.F. or 0.362 Ac.
LOT 5	= 17,863 S.F. or 0.410 Ac.
PUBLIC R/W	= 5,655 S.F. or 0.130 Ac.
OPEN SPACE	= 43,132 S.F. or 0.990 Ac.
TOTAL AREA	= 115,695 S.F. or 2.656 Ac.
RCA	= 17,393 S.F. or 0.399 Ac.
LDA	= 98,302 S.F. or 2.257 Ac.

APPROVED: ANNE ARUNDEL COUNTY, MARYLAND  
DEPARTMENT OF PLANNING AND ZONING

PLANNING AND ZONING OFFICER (PUBLIC UTILITIES) DATE  
LARRY R. TOM

APPROVED BY: \_\_\_\_\_  
DIRECTOR, ENVIRONMENTAL HEALTH DATE  
ANNE ARUNDEL COUNTY DEPT. OF HEALTH



### VICINITY MAP

SCALE: 1"=2000'  
COPYRIGHT ADC THE MAP PEOPLE  
PERMITTED USE NO. 20400770

### GENERAL NOTES

- The purpose of this Plat is to subdivide Parcel 308 in to five Lots and one Open Space Area.
- The property is known as Tax Map 78, Grid 2, Parcel 308, in Deale, Maryland by deed 14930 / 781. the Site Area is 2.656 Ac.
- Existing zoning of the site is R-5, Residential and OS, Open Space.
- The site address is 1 Cedar Drive, Deale, MD 20751.
- Tax account No. 07-000-01306010
- Existing topography and features shown hereon were taken from a field Survey prepared by Bay Engineering Inc., dated January, 2005.
- The Site is located within the Chesapeake Bay Critical Area, Limited Development Area (LDA) and Resource Conservation Area (RCA).
- The property is located in flood zones "A7, B, C and V9" per the Flood Insurance Rate Map (FIRM) #240008 0059C dated May 2, 1983.
- Tidal and non-tidal wetlands shown per field investigation performed by See Environmental dated May 9, 2005.
- The site is served by public sewer and private water.
- The waterfront area is a benefit of the community and no individual piers will be permitted. The number of slips allowed will conform with COMAR 27.01.03.07
- OWNER:**  
CULP ENTERPRISES, LLC  
c/o GEORGE BAILEY  
703 GIDDINGS AVE., U-1  
ANNAPOLIS, MD 21401

**DEVELOPER:**  
FLAGSHIP DEVELOPMENT, LLC  
703 GIDDINGS AVE., U-1  
ANNAPOLIS, MD 21401

**ENGINEER:**  
BAY ENGINEERING, INC.  
190 ADMIRAL COCHRANE DR. , SUITE 175  
ANNAPOLIS, MD 21401

Plat 1 of 2

### Major Subdivision PARKER CREEK

AN R5 SINGLE FAMILY DETACHED SUBDIVISION

Subdivision #05-014 Project #07-0153  
Tax Map 78, Grid 2, Parcel 308, Zoned: R-5 and OS  
Cedar Drive, Deale, Maryland 20751

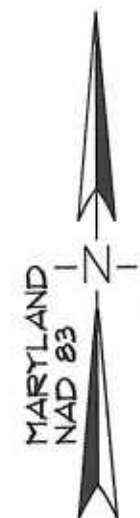
Scale: N/A Date: Aug 21, 2009  
Zip Code: 20751 Job Number: 04-1199  
Drawn By: R. Waters Folder Ref: Bailey - Parker Creek  
Approved By: T. MARTIN Datum: Maryland NAD 83

7th District, Anne Arundel County, Maryland

RECORDED IN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_, PLAT NO. \_\_\_\_\_



870-SA PLOTTED: Aug 21, 2009 - 3:00pm



# LEGEND

PROPERTY LINE / RIGHT-OF-WAY	---
EXISTING CONTOUR	---
EXISTING WOODS	~~~~~
EXISTING FENCE	-x-x-x-
EXISTING WELL	(W)
EXISTING ZONING BOUNDARY	---
EXISTING ZONING DESIGNATION	<b>R2</b>
FOREST CONSERVATION PROPERTY	
NON-TIDAL WETLANDS & 25' BUFFER	NTW
TIDAL WETLANDS & 25' BUFFER	TW

SEE PLAT 1 OF 3 FOR THE SURVEYOR'S CERTIFICATE AND OWNERS DEDICATION

Timothy J. Martin  
Professional Land Surveyor #10989



WE ASSENT TO AND JOIN IN THIS PLAN OF SUBDIVISION:

CULP Enterprises, LLC Date

CULP Enterprises, LLC Date

Prepared By:

**Bay Engineering Inc.**  
Engineers, Planners and Surveyors

190 Admiral Cochrane Drive, Suite 175  
Annapolis, Maryland 21401  
410.897.9290  
410.897.9295 fax  
email: info@bayengineering.com  
www.bayengineering.com



Parcel 240  
Faycal & Judith  
Abboud  
859 Cedar Dr.  
Deale, MD 20751  
Tax Acct. #1-000-03059000  
4952/14  
R-5

Parcel 136  
Robert & Mindy  
Hedaya  
863 Cedar Dr.  
Deale, MD 20751  
Tax Acct. #1-000-00155500  
11031/59  
OS

Parcel 219  
William & Peggy  
Heller  
800 Cedar Dr.  
Deale, MD 20751  
Tax Acct. #1-000-90012228  
5110/698  
R-5

Parcel 196  
James & Sandra Gobble  
949 Marzoff Rd., Deale, MD 20751  
Tax Acct. #1-000-00646950 Zone: R-5  
3015/230



**LDA  
RCA**

**R-5  
OS  
LDA  
RCA**

Parcel 191  
Dana Bullen III  
955 Marzoff Rd  
Deale, MD 20751  
Tax Acct. #1-000-00626508  
2101/425  
R-5

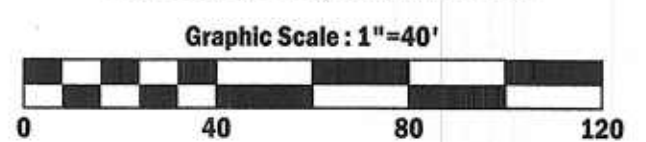
Parcel 308  
Culp Ent. LLC  
11 Cedar Dr.  
Deale, MD 20751  
Tax Acct. #1-000-01306010  
14930/181  
R-5 & OS

PARKER CREEK

APPROVED: ANNE ARUNDEL COUNTY, MARYLAND DEPARTMENT OF PLANNING AND ZONING	
PLANNING AND ZONING OFFICER (PUBLIC UTILITIES) LARRY R. TOM	DATE
APPROVED BY: DIRECTOR, ENVIRONMENTAL HEALTH ANNE ARUNDEL COUNTY DEPT. OF HEALTH	
DATE	

## Plat 2 of 2 Major Subdivision PARKER CREEK AN R5 SINGLE FAMILY DETACHED SUBDIVISION

Subdivision #05-014 Project #  
Tax Map 78, Grid 2, Parcel 308, Zoned: R-5 and OS  
Cedar Drive, Deale, Maryland 20751



Scale: 1"=40'  
Zip Code: 20751  
Date: Aug 21, 2009  
Job Number: 04-1199  
Drawn By: R. Waters  
Folder Ref: Bailey - Parker Creek  
Approved By: T. MARTIN  
Datum: Maryland NAD 83

7th District, Anne Arundel County, Maryland

RECORDED IN BOOK , PAGE , PLAT NO.

Cadd File: F:\Bailey - Parker Creek 04-1199\Survey\Plat Parker Creek.dwg A2-073